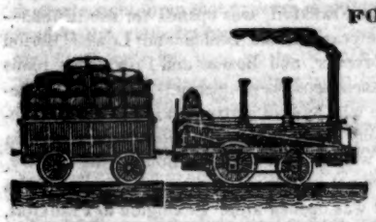
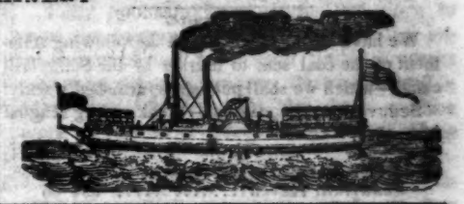
AMERICAN RAILROAD JOURNAL,

AND GENERAL ADVERTISER

FOR RAILROADS, CANALS, STEAMBOATS, MACHINERY AND MINES.





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Correspondents will oblige us by sending in their communications by Tuesday morning at latest.

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AMERICAN RAILROAD JOURNAL.

PUBLISHED AT 105 CHESTNUT ST. PHILADELPHIA.

Saturday, September 4, 1847.

Philadelphia Machinery.

The *Charleston Mercury* contains the following compliment to Philadelphia machinery. The locomotives in use are those belonging to the South Carolina railroad:—

"Our railroad now possesses a number of locomotives equal in power and finish to that of any other road in the country. Among them, the following are particularly worthy of examination:

"*From Norris, Brothers, Philadelphia.*—Eight-wheel passenger locomotive—John C. Calhoun; also six-wheel connected freight locomotive—Cerro Gordo.

"*From M. W. Baldwin, Philadelphia.*—Eight-wheel connected freight locomotives—Atlanta, Buena Vista, Coosa, Wateree, Chattanooga. Also the Rio Grande, six-wheel connected.

"*From Ross Winans, Baltimore.*—Eight-wheel passenger locomotive—Rough and Ready."

Belpri and Cincinnati Railroad

The stockholders in this company met at the court house in this city, on Wednesday, says the Chillicothe Advertiser of Friday last, and it having been ascertained that a sufficient amount of stock had been subscribed to authorize the organization of the company, the following directors were chosen:

Felex Renick, Wm. Ross, Wm. H. Price, John L. Green, John Maderia, W. M. Anderson, of Ross county; Allen Trimble, Wm. O. Collins, of Highland county; Wm. P. Cutler, Noah L. Wilson, of Washington county; A. B. Walker, John Ballard, David Richmond, of Athens county.

At a meeting of the board of directors on Thursday, they organized by the election of Felix Renick president, Wm. Ross, treasurer, and the appointment of Seneca W. Ely, secretary.

Railroads.

Eastern Railroad.—The Salem Gazette states that over one hundred and three thousand persons were conveyed over the Eastern railroad in the month of July last.

Vermont and Massachusetts Railroad.—A portion of this road, leased to the Fitchburg company, will be opened for freight and passengers on Wednesday next.

Ogdensburg Railroad.—The grading, etc., for 60 miles of this road, from Ogdensburg to Malone, is advertised to be let to contractors on the 22d September, at Ogdensburg.

Lexington Railroad.—The directors have made 600 shares of new stock, to be taken by stockholders at $70, payable 15th September, 1st November, and 1st December.

The Northern, N. H., railroad has been opened as far as Grafton, 37 miles from Concord.

Gloucester Branch Road.—During the twenty days which this road has been open to Manchester, upwards of 4,000 passengers have been safely transported over the same. This is truly a great beginning, and augers almost unexampled success for the road, when, under complete equipments and arrangements, it shall be opened to Gloucester—an event expected to take place in all the month of October next. We understand that, for the present, Mr. Ebenezer Page, of Beverly, will officiate as conductor on this branch.

Columbus and Xenia Railroad.—The Little Miami railroad company, says Mr. Cist, under the authority in their charter to make branches running through any county in which their main line runs, have agreed to make a road from Xenia to the line of Greene county, to meet the railroad from Columbus. This will, of course, facilitate the completion of the Columbus and Xenia railroad at an early date. The rail route from Columbus to Xenia is straighter than the regular stage route between those places.

The Muscogee Railroad.—By a private letter from New York of the 19th August, says the Savannah Republican, we learn that the Wall street proprietors of the Macon and Western railroad have made their arrangements to run from Barnesville to the Flint river, leaving the connection from that point to the people of Columbus. Messrs. Cooper and Stroup will, it is said, furnish the rail at seventy-five dollars per ton, and take a portion of the stock in payment.

The Firth Dock of the Schuylkill Navigation is now in use, although not fully completed. It was erected under the direction of the superintending engineer of the company, Elwood Morris, Esq., and is a noble and substantial structure. While it is durable, it also presents facilities for shipping any amount of coal that may be required without inconvenience or delay.

Influence of Railroads.

A short time since, says the Concord, N. H. Journal, we met a heavily loaded team a little distance from town carrying chestnut sleepers to the depot. Being of a peculiar shape, we inquired to what use they were to be appropriated. The teamster replied that they were engaged by a contractor, and were to be shipped to Havana, to build a railroad in the Island of Cuba! Concord chestnut, once nearly worthless, now bringing a high price, and shipped 2000 miles to build railroads! We believe the teamster's load was worth about $50, all clear gain through the magic influence of railroads.

A respectable citizen of our town, once resident in Springfield, on the dreary height of land between the Merrimack and the Connecticut, near which the Northern railroad is to pass, lately informed us he had tried long and earnestly to sell a lot of timber land for $4 per acre, but all in vain. Not long since some gentlemen called upon him, and offered $16 per acre, which he accepted, though he might have done better by waiting. This is by no means a solitary instance. They are of frequent occurrence in every part of the country.

Railroad Scales.

Messrs. F. H. Benson & Co., of Cincinnati, says the Times, have manufactured a railroad scale which will weigh 40,000 pounds, and yet turn with the fraction of a pound weight. These gentlemen have become noted for their skill in the manufacture of all kinds of scales, from the apothecary's counterbalance, to the enormous instrument first mentioned. Success attend our western manufactures.

ERRATA.—In the last number of the Journal, page 560, under Lehigh Coal Region," the figures (20) for the miles of the Wilkesbarre and White Haven railroad, are placed in the wrong column—being under the head of canals.

Also same page, middle column, third line from top, read $3,250,000.

Railway Traffic.

"From our official returns," says the Railway Chronicle of July 31st, "it appears that the amount of traffic for the last week, on upwards of 3,153 miles of railway, was £188,824, thus accounted for: £108,606 for the conveyance of passengers only, £40,476 for the carriage of goods, and a remainder of £39,742 for passengers and goods together, not respectively apportioned; being an increase of 16,-175 over the corresponding week of last year, when the mileage was about 2,290."

Coal Trade.

We have been furnished with the following statement of the coal sent to market by the Schuylkill canal—which we shall publish as furnished weekly.

SCHUYLKILL NAVIGATION.—Week ending August 26th, 1847.

	Tons.	cwt.
Pottsville and Port Carbon	5,624	01
Schuylkill Haven	594	06
Port Clinton	33	00
This week	6,253	07
Previously	121,956	14
Total	128,210	01

From the Philadelphia Ledger.

New Railroad.

The vast increase of tonnage annually requiring conveyance from our coal fields, and the success that has attended the Reading railroad, seem to awaken the capitalists of New York and Boston to the probability that there may be business for more improvements connected with the coal trade. At the present rate of increase, there will be perhaps two millions of tons more requiring means of transport in five years from this time. The Easton papers inform us that the stock has been recently taken for the construction of a new railroad from Easton along the valley of the Lehigh, to the Schuylkill coal field, branching off to the Lehigh and the Pottsville mines, and also to the Susquehannah, via Tamaqua. From Easton to Somerville, N. J., the road is in progress of construction. From the latter place to the New York bay at Elizabethtown, it has been long in use.

When we look at the great number of canals and railroads, all well supplied with work, that are necessary to do the carrying trade of the mines of England, which are of less extent than ours, we feel entire confidence in the success of every avenue leading from our Schuylkill coal basin to tide water.—The Lehigh canal, the Delaware Division, the Morris canal, the Schuylkill canal, the Reading railroad and the proposed railroad across Jersey.

The Iron Trade.

We learn from the Mining Journal of 7th August, that railway bars remain about the same as at the last arrival, viz: £9, average, though "the export demand for Welsh bars improved in past month, and the lowest price is now £8 10s. in Wales, but some will not sell under £8 15s. Staffordshire prices continue firm, and the demand for hoops has lately been unusually large. Scotch pig has advanced 5s to 7s. 6d. in the last four weeks. About the middle of July, a large business was done, but for the last fortnight transactions have been limited. The strike of the men is partially over, and it is expected that those who are still out will soon resume work at the proposed reduction of wages. Some recent arrivals of Swedish iron have been sold at £11 5s., but of steel no sales are reported."

"An improvement," says a correspondent of the same Journal, "of 5s. to 7s. 6d. per ton has taken place in Welsh bars since last month, and a considerable business has been done both for exportation and home trade at the advanced rates. So full are some of the makers with orders that they cannot undertake to execute contracts before October next. Railway bars continue exceedingly dull. Staffordshire manufactured is still in fair demand, and makers are realizing full prices. Scotch pig iron has slightly advanced since last mail, owing principally to the strike of the men, and the small quantity in second hands. Staffordshire pig is in good demand at firm prices, but Welsh appears rather neglected Swedish iron has been taken in small parcels at £11 5s., at which there are still sellers. Swedish steel remains flat at £15."

The Great Canada Railroad.

The Albany Evening Journal says that the railroad, so long talked of, from Hamilton to Detroit, is to be built. This is a fixed fact. The surveys have been made, the route located, and next month, 170 miles will be let out by contract. The road is to run from Hamilton to London, and from London to Windsor opposite Detroit—a distance of about 200 miles. The original route was to Port Sarnia, 60 miles above Windsor; but a compromise has been affected, and a branch is now to be run from a point 13 miles west of London to Sarnia. This satisfies the original projectors of the route from Fort Erie to Windsor, and also the Canada Land company, and others most interested in the route from Hamilton to Port Sarnia direct.

Although nominally running from Hamilton west—the principal track, in which American travel is interested, will start from Niagara Falls, at the point selected for the suspension bridge—the entire stock for which is already subscribed.

There can be no longer a reasonable doubt that the road will be built within three years. When finished, the trip can be made from the Falls to Detroit in 10 hours—a very great improvement upon locomotion, even in Summer, and in Winter to an extent only to be appreciated by those who have performed the weary journey.

In connection with this road, the road from Lockport to Rochester is projected. Its friends are making renewed efforts to fill up the stock. We are informed that the work will be placed beyond a contingency when $200,000 additional stock is taken. But whether this is so or not, when the Canada road is built, the Rochester and Lockport road will be undertaken.

This Canada road is of vital interest to our own thoroughfares. When completed, it will draw immense travel in this direction, which now seeks other channels. It is but a link in the great chain to St. Louis. We may regret that it is to be first built through a foreign territory: but enterprize and commerce are making of "one blood all nations of the earth."

Frankfort and Louisville Railroad.

We are pleased to learn that "on Saturday, the 14th ult., the stockholders of the Frankfort and Louisville (Ky.) railroad met according to a call of the commissioners, for the purpose of electing directors for the ensuing year. It appeared that there were over 3500 shares taken, and nearly all was represented at the meeting. Whereupon C. Coleman, V. McKnight, J. Guthrie and W. H. Field, of Louisville; T. Smith, of Newcastle, and J. Swigert, were elected directors for the ensuing year. At a meeting of the directors on Monday, 16th, C. Coleman, Esq., was elected president of the company, and steps were taken to have an immediate survey and estimate made."

From the spirit evinced at the meeting, as well as by those interested in the construction of this road, we are induced to believe that the work will now be pushed on to an early completion.

It will be recollected that the people of Lexington and Frankfort, Ky., were among the *early* movers in favor of railroads. By refering to the "Table of Railroads in the United States," column *d*, it will be seen that the "Lexington and Ohio" railroad, or a part of that proposed road—28 miles—from Lexington to Frankfort, was opened for use in 1835—the same year that the Boston and Lowell, Boston and Worcester, and Boston and Providence roads in Massachusetts, were opened. Yet, unfortunately, those who took an active part in that early movement, were far in advance of most of the people in that, as well as most other, sections of the country, and were not sustained in their efforts; and when the road was opened from Lexington to Frankfort, the cost was so much beyond their expectations that the work was suspended; and, until recently we believe, little effort has been made for its extension to the Ohio river—although that part of the road which has been in operation since 1835, has been of comparatively little use to the public, and less to the stockholders.

It has, however, been leased out for several years to a company of gentlemen, of whom the late lamented Col. W. R. McKEE—who fell fighting so gallantly, at *Buena Vista*—was one. He had the management of it, we believe, and had he lived, he would probably have been one of the most active in the work now under consideration; as we recollect well the interest he took in it, in the summer of 1845, when on a visit to New York. But, like a *true American*, as he was, when the call of his country reached him, he was second to no man, but among the first to offer his services—and with his brave companions, who made him their leader, he sought the post of danger, which proved to him—and many others of his gallant band—the post of honor and of death.

Schuylkill Navigation Company.

We received, in May last, a copy of the annual report of the President and managers of this company to the stockholders, at the close of their last years' operations; but by some means it got into the wrong "pigeon hole," and thereby has been sadly neglected. We are the more particular to account for this omission because we published at length the report of its near neighbor and *rival*, soon after its appearance.

From this report it will appear that an amount of labor was performed upon this work, almost unparalleled in this country, and at times, under the most discouraging circumstances. There are few men, if any, in the country, who could, under the circumstances—the market value of the stock of the company being at little more than half its *par* value, with a powerful rival work along side getting into successful operation—have accomplished what the president of this company has done. "But," as he says in his report, after enumerating the difficulties to be overcome, "nevertheless, the great object has been accomplished in a substantial and satisfactory style."

The capacity of the canal is now about three times as great as it was the year before—and nine times as great as when originally opened to the trade. The locks are 18 by 110 feet, and will pass boats carrying 180 tons.

The amount of business done thus far on the canal, since its completion, has not equalled, as we understand, the anticipation of some of its friends.

This disappointment arises, we apprehend, from a want of the conveniences and connections between the canal and the *mines*. The *landings*, or means of discharging coal from the cars into the boats was formerly owned by individuals, or companies, and not by the navigation company, and it was probably desirable to the latter company that a similar arrangement should again exist—but since the completion of the Reading railroad and the use of that company's cars, the operators have been relieved, to a great extent, from that expense, and they were, of course, not very desirous to incur it again, and therefore, there has been, up to the middle of this month, at least a want of landing room, or place for boats to take in coal. The navigation company has however taken very efficient steps to remove this difficulty—by the construction of spacious docks, and every convenience for discharging coal into the boats. They have also furnished an ample supply of cars to accommodate the business between the mines and the boats—thus placing the operators, who send by the canal, on the same footing with those who send by the railroad, in this part of the business.

Being on a visit to the coal region a short time since, we examined with some care, the work of the "enlargement" between Port Carbon and Schuylkill Haven, a distance of several miles, which we found to have been done in a substantial manner, and the "docks" in course of construction at "Port Carbon" and "Mount Carbon" will, when completed, be creditable to the company—and the engineer, Elwood Morris, Esq., and afford ample accommodations for a very large business.

It was our wish to have examined the enlargement generally, but such are the habits acquired by the rapid movements upon railroads, that no man has patience to waste his time upon a canal unless he is *obliged* to, especially when the accommodations are only those of a "coal boat"—even of the largest dimensions—we, however, saw enough of the work to be satisfied that there will be a large business done upon the canal again, when the company shall have completed their arrangements for its accommodation. We were also convinced more fully, if possible, than heretofore, that there is no *necessity*, or *cause*, for controversy between the two rival companies, now contending for the business of the Schuylkill region, as it will be impossible, or at least very difficult for them both, without very much increased facilities, to meet the demands upon them for the next *five* years. Why not, then, *now* come to an amicable arrangement as to the charges for transportation on each? The coal consuming community, which has been so largely benefited by these works, and which owes so much to the capitalists who have constructed them, will cheerfully pay prices that will give a fair return upon the investments—large as they are—and it is only necessary for the managers of the two works to agree upon fair, remunerating rates, and thus make their immense outlay of capital beneficial to *all*, those who have *invested* their capital, as well as those who use the articles transported at the *very lowest rates* ever known.

It may be deemed impertinent in us to suggest and urge this policy upon the two companies; yet we cannot hesitate to repeat what we have often before suggested, inasmuch as we consider it not only for the interest of those who have invested such an enormous amount of capital to accommodate the coal trade, but also just to those who have been so largely benefited by that outlay in the cost of fuel.

We have occupied more space than we intended when we took up the pen to simply introduce and commend the following report, which we ought to have laid before our readers months ago. It will, however, be read, even now, with interest by those who have not yet had the opportunity.

The following is a list of officers and managers for the year 1847, viz.—

President.—Charles Ellet, Jr.

Managers.—Thomas Firth, John Sergeant, Jacob G. Morris, John C. Cresson, William E. Hacker, Samuel W. Lippincott, Thomas Williamson, John W. Claghorn, John R. Worrell, Charles S. Wood, James R. Greeves, Eli K. Price.

Treasurer and Secretary.—Claudius Harper.

Report of the Managers to the Stockholders of the Schuylkill Navigation Company, January 4th, 1847.

It is the duty of the President and managers to submit to the stockholders a report of their proceedings for the year which has just closed.

On assuming the labors of the responsible trust which was confided to them, one year ago, the Board were conscious that the affairs of the company had approached a crisis, which would call for the exercise of all their perseverance and fortitude. A great work had been commenced, which they were expected to complete with unprecedented rapidity, while the credit of the company had suffered under the influence of a remarkable competition, and the misrepresentations of hostile interests.

But that work was designed to open the way to the richest trade which this country offers to persevering enterprise, and they embarked in the labor with undoubting confidence in the issue.

They have now to congratulate the stockholders, that the first great object is attained, and that they possess an improvement ready to do its part in the competition about to ensue for the anthracite trade of Pennsylvania, and that they may look forward confidently for a speedy return for their outlay, and full remuneration for the labor which the work has cost.

On entering upon the duties of the year, the Board became convinced that the contracts which had been let, would greatly exceed the available means in their hands.

These contracts they were bound to fulfil, although but few of the contractors had taken any efficient means to fulfil their engagements with the company.

The old locks were torn down, and the greater part of the navigation was destroyed, while materials sufficient for the new locks were in few places provided, and, in many instances, neither stone nor timber was on the ground, and no preparation had been made for the work.

There were 71 locks and 11 guard gates to be built—of which more than two-thirds were to be raised from the foundation; nearly all the culverts were to be lengthened; more than 150 bridges, and 26 or 28 dams to be raised; and all the pools to be cleansed and deepened.

About 40 of the lock foundations were yet to be laid *in the river*; the river was covered with ice, and there were few boats or scows in the adjacent pools with which to transport the necessary materials to the work.

A brief review of their position satisfied the Board that there was but one course to be pursued, which could lead to safety and success—the bold course, which the general opinion of the stockholders had marked out, and which had been expressed in a resolution—to carry the whole work on to completion, in the face of these physical difficulties, as rapidly and as thoroughly as possible.

They accordingly proceeded at once to raise the necessary funds, and put the enlargement of the canal itself under contract—to man the new sections with all possible expedition—to augment the force on the work in actual progress—to relet, or place under competent superintendents, the abandoned locks, and to accumulate a force sufficient to complete the whole work, as they vainly hoped, in time to participate in the trade of the year.

But impediments intervened which baffled their efforts, and disappointed their well-grounded expectations.

The immense demand for labor in the coal region, on the line of the improvement, and in the repair and reconstruction of a neighboring work, gave rise to frequent turn outs among the hands, and rendered it impossible to obtain a greater force, at any one time, than about 4000 men.

The mechanical labor of the Schuylkill valley, and the adjacent country, was absorbed by this extraordinary demand; and an adequate number of masons and carpenters, with all the exertion the Board were capable of making, could not be raised to carry the work forward with a rapidity commensurate with their wishes.

To add to their embarrassment, the close of the winter proved to be unusually inclement, and the operations were frequently suspended by heavy snows, the melting of which, in the month of March, produced a freshet in the Schuylkill, and adjacent waters, of great violence and destructiveness.

The new works, in their unfinished state, were necessarily exposed, and being swept by the flood nearly the whole length of the river, were seriously injured at many points. The coffer-dams gave way before the weight of water, some of the foundations of the locks were torn up, the half finished pits of others were filled or destroyed, and the new banks were burst through in numerous places.

The works were re-commenced by the time the water had subsided, and the injured points were pressed with renewed exertion, in the expectation of yet overcoming these additional causes of delay, and gaining a part of the season's trade.

This hope was also disappointed. The water continued generally high for some weeks, and frequent small freshes occurred—such as would have been of little importance at ordinary times,—but still sufficient to overflow the coffer-dams, and produce much inconvenience in the conduct of work requiring the excavation of rock and earth, and the building of walls on the bottom of the river.

This state of things continued, with little

interruption, until the middle of May, when another fresh, equal to the first in violence, swept over the works, again destroying many of the coffer-dams, tearing out the foundations, and even the masonry of several of the locks, and sweeping off portions of the enlarged canal which had been twice completed.

After this occurrence, it became apparent that many of the contractors, who, it had been hoped, might yet finish the work which they had undertaken, could no longer be depended on for the fulfilment of their engagements.

The Board were accordingly compelled to enter upon nearly every difficult job; to engage superintendents, to build shantees, organize forces, and complete the work by the day.

This procedure—the only alternative that remained for their adoption—brought with it its own embarrassments. But, nevertheless, the great object has been accomplished; not, it is true, at as early a period as they had contemplated; not as soon as the great interests of the company rendered desirable; but in a substantial and satisfactory style, and with a rapidity which admits of no parallel in the history of the internal improvements of this country, if it has any parallel at all.

The capacity of the navigation has been made nearly three times as great as it was the year before, and nine times as great as that of the improvement when originally opened to the trade—an improvement which, as is still remembered, required ten years of laborious exertion on the part of the predecessors of the present Board, and ten years of patience and fortitude on the part of the original stockholders.

But in this year of intense application, we have been cheered by the prospect of secure, speedy and ample remuneration; by the certainty of enjoying a sufficient share of a vast and rapidly increasing trade, which we were preparing to convey to a wide spread market by the cheapest possible means of inland communication. They—our predecessors—had nothing but the speculations of their own prudent intellects to guide them.

They ventured to hope that *thirty thousand tons of coal per annum* might possibly pass over their line to market; we know that the Schuylkill mines now yield a million and a quarter of tons, and that some hundreds of thousands more are kept back for want of the means of conveyance, while the annual increase may now be set down at nearly ten times the value of their estimated trade.

To stand firm in their trials, required manly fortitude: to doubt with the prospects which we have before us is to lack capacity to judge of visible truth.

It is not deemed expedient or necessary to enter into all the details of the operations of this laborious year. It may suffice to say that the navigation has been increased from a canal of very irregular and contracted surface, to one averaging more than 70 feet in width; from a depth of 4 feet to nearly, if not quite, 6 feet; and from a capacity to carry boats of 60 tons, to a capacity for boats of not less than 180 tons burthen. (See note 1)

That 71 locks, (none less than 110 feet long by 18 feet wide,) and 11 stop gates have been built:

That 25 culverts have been lengthened, and 4 new ones built:

That 10 aqueducts have been raised, improved, and strengthened:

That 82 bridges, with their embankments, have been raised, and 74 new ones, of various descriptions, have been built:

That 22 dams have been permanently, and some others temporarily raised, and that 5 have been lengthened out so as to vent the floods of the river with more certainty:

That all the pools have been more or less deepened, and nearly all the old channels thoroughly cleaned out; and two entirely new channels cut for the river:

That divers new guard banks have been made, and many of the old ones raised and strengthened, for the better protection of the works:

That new sluices have been put in many of the dams, for the purpose of facilitating the future cleansing of the channels:

That 18 new waste weirs have been built, and 13 old ones raised and improved:

That the tunnel has been widened and enlarged, many of the towpaths have been raised, and new basins cut and walled, for the accommodation of the miscellaneous trade:

That 6 new lock houses have been built; the bottom and sides of the canal, in the worst portions of the limestone formation, have been lined with plank, and that buoys, floating or fixed, have been set in all the channels of which the navigation is at all doubtful:

That surveys have been made of all available streams which furnish sites for reservoirs, and several of the most valuable sites have been secured by purchase:

That ground for new landings has been secured, and the work of construction commenced:

That 120 boats and scows, and 150 additional cars have been constructed, and delivered to the company.

These are the things which have been accomplished: the labor which they have involved can only be appreciated by those who have witnessed or participated in it.

In the month of April, the engineer originally appointed to aid in conducting the work, tendered his resignation to the Board, and it was accepted.

The upper division, extending from the Girard outlet to Althouse's, 31 miles, was laid out and skilfully executed under the direction of Elwood Morris, civil engineer.

The next division, reaching from Althouse's to the outlet of the Girard canal, was placed under the general superintendence of Antes Snyder, civil engineer.

The completion of the upper portion of this division is mainly due to the skill and experience of Samuel Griscom. The lower portions were urged forward by several officers, with great diligence and devotion.

The work on the lower division, extending from the Girard outlet to Fairmount, was conducted with indefatigable labor and attention, by James F. Smith, civil engineer.

To the skill and zeal with which Messrs. Morris, Griscom, and Smith have carried out the views of the Board, the company is much indebted for the rapid and substantial execution of the work.

The Fairmount lock was first prepared for the trade, and opened for the passage of boats on the 4th day of May.

The navigation was further opened, for small boats, as far as Phœnixville, on the 29th June, and for large boats as far as Reading, on the 11th September.

Large boats were able to pass throughout the line, from Port Carbon to Philadelphia, on the 16th of November.

Several small steamboats ran regularly and successfully on different parts of the navigation, as soon as the large locks were open, and some trips were made by them towards the close of the season with entire success, to Pottsville and Port Carbon.

The most heavily laden boat that descended during the year, conveyed 160 tons of coal, and drew 5 feet water; but there was a sufficient depth in all parts of the work to have passed the same boat with more than 180 tons.

Other boats descended with 130 and 140 tons, drawn as the old boats usually were, by two horses, and managed by three men.

It is fortunate for this company, and for the public interest, that, during the interruption of the navigation consequent on the prosecution of these extensive works, the trade of the coal region has continued its development, without suffering any very serious embarrassment. The trade of the Schuylkill navigation has been maintained by the vigorous exertion of a neighboring work, until the completion of the enlargement will enable this company to resume its legitimate business.

The details of the cost of this improvement, and an exposition of the company's financial affairs, will be exhibited in a sheet prepared by the treasurer, and appended to this report. (See statements A and B.)

It may, however, be here stated, that the aggregate investment of the company, on the first day of January, in stock and loans, including all ascertained liabilities of every description, as well for the construction of the work as for boats and cars, damages and real estate, amounted to the sum of $5,655,667 80

To this must be added for known liabilities, of which the amounts are not precisely ascertained, payable in bonds and cash, about 127,000 00

Making for the present aggregate investment, $5,782,667 80

There are yet some matters in litigation, and certain claims for damages to real estate, which have not been settled, the value of which, though not great, cannot be correctly estimated. (See statement C.)

TARIFF OF TOLL.

On the opening of the lower division of

the navigation as far as Phœnixville, in the month of June, a tariff of toll was adopted, which differed in its arrangement essentially from those in general use on other public works.

It has been the custom on canals and railroads, both in this country and Europe, to charge a certain established rate per ton per mile for the use of the improvement—not from any evidence that has ever yet been adduced that such a tariff is founded in justice or good policy—but, apparently, because that arrangement had been prescribed without much reflection, in the early characters of British canals, and has been subsequently imitated by those of later date in Europe and America.

In the tariff adopted by this Board, an attempt has been made to tax every article with due reference to the particular circumstances under which it is placed.

They do not fix on a rate of charge which is to increase blindly with the distance, because they cannot perceive how the ability of an article to bear taxation can possibly increase in proportion to the distance it must be carried.

The further an article is transported on the navigation, the greater is the sum which must be paid for *freight;* and the higher the sum paid for freight, the less, apparently, can the article bear to be taxed for *toll.* It would seem to be very unjust, then, to increase the charge for toll, precisely as the ability to bear the charge diminishes

The producer of any cheap commodity above Reading, would be compelled to pay nearly four times as much freight for sending his property to Philadelphia, as the person who produces it at Plymouth. It is certainly, then, very unfair to make the same party pay four times as much toll also.

It is unjust, when the cost of freight amounts *almost* to a prohibition, to fix such a charge for toll as will make the prohibition perfect.

The only visible object that could be designed by establishing such a tariff, after its effect had been once perceived and appreciated, would be to secure the exclusion of the distant product—a policy which is certainly both unwise and oppressive.

But, admitting that a company may with propriety overlook the claims of justice and fair play, it is impossible to overlook the fact, that by excluding the distant product, and cutting off a source of trade, they diminish the revenue of the institution.

It might, indeed, be argued, that if the distant producer can afford to pay a given charge for toll, the nearer producer, under similar circumstances, and relieved of the extra cost of freight, can certainly afford to pay the same charge; that, in strict justice, the nearer a producer is to the market, the higher is the toll which his property will really bear; and that, so long as it is not taxed higher than that of his more distant competitor, he should consider himself the favored party, and offer no complaint.

It is for the company, whose duty it is to adjust the charges, to look to the circumstances of other lines, and so regulate the tolls as not to force the trade into the hands of rivals.

Although the season was very far advanced when any portion of the work was open to the trade, the Board have had sufficient opportunity to recognize the correctness of the views which led to the adoption of the present tariff, in the results already obtained.

The proceeds of every office below Reading exhibited a marked, and most satisfactory improvement over the corresponding periods of previous years; and the amounts both of the ascending and descending miscellaneous tonnage, show an increase, during the period the canal was open, which sufficiently demonstrates that the trade is receiving adequate encouragement to insure its future wholesome expansion. (See statements D and E.)

To be Continued.

Railway Accidents in England.

Long-Boiler Engines Running off the Road.

We find in the Railway Record, for 31st July, the following communication, in which it is contended that "long-boiler engines" are probably the cause of many accidents. It being a subject in which so many are deeply interested, we give it a place in the Journal for the purpose of calling attention to it:

SIR: As an adjourned inquest on a recent fatal case of running off the Brighton line is to be held on the 3d of August, I shall feel obliged by your insertion of the following note in your paper, of Saturday.

Those of your readers who are familiar with the history and progress of the locomotive engine during the last eighteen years, must be aware of the great fact, that the engines manufactured by Messrs. R. Stevenson & Co., up to about the year 1843, were rarely, if ever, known to run off a line, even when both the engine and road have been in but moderate order; and, moreover, that the engines made by various other makers, in imitation (or nearly so) of those introduced by Mr. Stephenson up to about the year 1843 were very nearly as successful in keeping on the road, and therefore it may fairly be considered, as proved by some fourteen years' experience, that certain constructions are very safe; and the writer was recently told by a gentleman connected with Messrs. Sharp, Brothers & Co., of Manchester, that whenever at liberty to do so, they still make their engines on the general form in use prior to 1843; and both they and other parties have, up the present time, made engines of that construction, with the same satisfactory results as before, and with as much speed, with as much force, and with as much at least, if not more, economy in working than the modern long boiler engines. The Brighton company know this to be a fact from their own experience.

The reader will probably ask, how then is it that the long boiler engines have been so powerfully supported on so many lines of railway? I believe that it chiefly arises from two causes! First, the great influence of anything introduced from that quarter is not very easily to be set aside in consequence of its extensive connections with most of the leading lines, and the numerous and influential train of confidence by which it is in most cases so deservedly supported, both by directors, officers, etc. Secondly, the general arrangement of the long boiler engine makes their construction much less expensive, and much more profitable to the manufacturers, the price obtained being about the same as for engines of a safer construction; and hence the majority of engine makers recommend them when they have a chance of doing so successfully; and before those combined influences are checked, it will probably require six times the loss of life and property now sustained by the long boiler engines running off nearly every line upon which they have been introduced, before the matter will assume sufficient importance for such a sifting inquiry as will cope with, or effectually check the influence which is still continuing and forcing that class of engines into public use.

Formerly it was considered—and soundly considered, too—by Messrs. Stephenson's party, that the less projecting weight there was over the axles, the safer the engines were; and even contended that the little extra projection of the extreme part of Mr. Bury's circular fire boxes was a serious objection, as it not only gave a greater motion and leverage to the projecting weights, but the force of such motions being governed by the square of the velocity of action, the matter was still more important, and led to the very general adoption of a third pair of wheels behind, as larger fire boxes became introduced. A view of that class of engines as made by Messrs. R. Stevenson & Co., until 1843, is given in the 89th plate of "Tredgold on the Steam engine," where the distance between the wheels, as compared with the extreme length from the front of the smoke box to the hind end of the fire box, is in the proportion of 10 to 13; while that of the long boiler engines are about 10 to 19, and hence the square of their lengths are as 169 to 361, or about 113 per cent. increased power of projecting weight to force the engines off the rails, when once put in action by the working of the engine, or from a little irregularity in the road. And it is no matter of surprise that long boiler engines should be found running off the line every now and then;—but that with such important odds against them in the principles of construction, the forces tending to twist the engine off the rails being increased so nearly up to the power of resistance of wrought iron, that when the irregular motion of the engine exceeds a certain point, the iron rails in most cases have proved no longer able to bear the excessive pressure of the wheel flanges against them, and have been fairly crushed off in splinters by the rounded and blunt surface of the flanges. The strength of rails and fastenings of the chairs which stood well with the construction of engines made up to 1843, have been found decidedly too weak for the motion of long boiler engines; with the latter class, I have frequently seen the vertical action between the engine and tender ranging from four to eight inches upon new roads, which, with an old steady engine, were freely pronounced both by the present and late

inspector general, as quite fit for public service.

For the purpose of urging the contractors to keep the road in better order on different occasions, I selected the long boiler engines for the purpose of pointing out, and magnifying to them, the imperfections of the road, which the long projecting boilers of that class of engines enable them to do to a dancing extent, which the former class of engines were altogether incapable of. And in attempting, and that successfully, to reduce in some degree the vertical action of the front and rear of those engines, some of the front and hind springs were reduced to very nearly the length used in Mr. Stephenson's, when they were not in the habit of running off the road in the manner long boiler engines have so repeatedly done. In the 89th plate of Tredgold, before referred to, the length of the front and hind springs are each twenty-six inches, and in reducing the length of some of the weak springs of the front and hind shafts of the long boiler engines, from three feet to twenty-four inches, it will be seen that I was adhering very closely to a good established practice as to length; and in engines projecting as extensively as they do, both over the front and hind axles, it is well known from experience, that much stronger springs are necessary than when the projection of the weight is moderate, as in Mr. Stephenson's former engines; but Mr. Winter, the young gentleman who has given it in evidence that he is the superintendent of Mr. Stevenson's patent engines, and that in his opinion the shortening of the springs was the cause of the engine running off the road, has not had much experience in such matters; and this may in part account for such an assertion.—The circumstance of his being too credulous to be believed, may further account for such an opinion. At any rate, the fact of that young gentleman being unfortunately too careless to be correct, may altogether account for an opinion so much at variance with not only their own drawings and experience, but with that of the whole country. The 'White Horse of Kent,' an engine made at Mr. Stephenson's establishment, went off the Dover line with long springs; and the numerous other long boiler engines which have gone off the road on the Eastern Counties', Great North of England, Hull and Selby lines, etc., since their recent introduction, had all of them long springs. By what sort of a side wind were they sent off the road? Certainly it was not by having short springs; in fact, such a shallow pretext as that of short springs only shows how hard the party are driven to throw dust in the eyes of the jury, if by any means they can be shuffled off from instituting a searching comparison between the extreme length of the boiler, and the distance between the front and hind wheels in engines which proves to the present day to keep on the road at any speed, as compared with the long boiler engines, which have frequently been running off the line—bursting out the chairs, and bending the rails of nearly every line they run upon.

Altogether the long boiler engines differ so materially, and are so opposite in principle, to the excellent engines formerly made by the justly celebrated gentleman whose name they bear, that nothing but the most positive proof to the contrary will induce me to believe that they are the production of Mr. Robert Stevenson's long and extensive experience, or of his great scientific and practical knowledge.

J. GRAY.

Gray Friars, Chester, July, 29, 1847.

Menai Straits--Tubular Bridge.

The following remarks of General Pasley, late Railway Commissioner of England, in relation to this work, may be interesting to some of our readers, and we therefore give them a place.

The Britannia Tunnel Bridge.—As it is well known, that when examined before a select committee of the House of Commons on the 6th of May, 1845, on the means of passing the Chester and Holyhead railway over the Menai Straits, I approved of the tubular bridge then proposed by Mr. Robert Stevenson, engineer of that company. I think it a duty to myself, if not to the public, to offer some observations on the various projects for effecting the same object, successfully brought forward by him, of which that alluded to was the second.

In the first plan, which had previously been referred to me officially, by desire of the Earl of Dalhousie, in the month of February of the same year, when I had two interviews with Mr. Stephenson on the subject, he proposed to throw a massive substantial bridge, with two segmental cast iron arches, each of 350 feet span, over the straits, having a clear height above the water of 116 feet in the centre, and of 50 feet at the springing of each of those arches, which were to be supported by an intermediate pier of masonry, 120 feet wide, on a shoal called Britannia rock, and on two abutments also of masonry. His plan of operation for putting the pieces of iron for his arches together successively, so as to balance each other, by working outwards from the upper part of the pier, and of the abutments, until his semi-arches should meet at the centre of each opening, seemed to me to be crude and ill digested at the time, and either impracticable, or nearly so. As I had often previously reflected upon the subject, I gave Mr. Stevenson my opinion that, in consequence of the impossibility of obtaining any support from below, a suspension bridge such as that previously erected by Mr. Telford over the same straits, which being every where 100 feet high, offers no impediment to the navigation, and having in its present state strength enough to bear the weight of the heaviest railway train, but not with safety, owing to the flexibility and extraordinary undulations of the roadway in a gale of wind, might be rendered efficient for all railway purposes by four vertical trusses, one on each side of the two lines of rails, which, if of sufficient depth, would produce that rigid inflexibility of roadway, without which no railway bridge can be considered safe; a principle first adopted by Mr Tierney Clark in the construction of the suspension bridge at Hammersmith, and more recently by Mr. Rendell, with no less success, in his repairs of the suspension bridge at Montrose, after one-third of the roadway had been carried away by a storm, on the 11th October 1838, when I was travelling in the Highlands of Scotland, which drew my attention to the subject, and induced me to offer a paper on suspension bridges to the Institution of Civil Engineers, which was published in their *Transactions* for 1810. I further suggested to Mr Stephenson, that a suspension bridge for passing a railway over the Menai Straits might be trussed to advantage by wrought iron lattice work, such as Sir John McNeill had adopted for passing the Dublin and Drogheda railway over the Royal canal near Dublin, by a bridge of 140 feet span. Afterwards the Lords of the Admiralty employed Sir John Rennie and Mr. Rendell, civil engineers, and Captain Vidal, R.N., to examine that part of the Menai Straits where the railway bridge was proposed, and to consider what conditions they thought necessary to prevent the navigation from being injured.—On receiving their report, the admiralty required that the Chester and Holyhead railway company, in making their bridge over the Menai Straits, should not construct the central pier on Britannia Rock wider or longer than 50 feet, and that there should be two openings between it and the abutments, each of 450 feet in clear width, and everywhere to be of 105 feet in clear height above high water level.

Mr. R. Stevenson's second plan, when thus obliged to withdraw the former, was to erect a suspension bridge of the usual construction, in order to obtain a platform for his further operations as I had before suggested. But the sort of bridge which he now proposed to put together by this means was of a novel and very ingenuous construction, consisting of two large tubes of boiler iron, illeptical in section, and each measuring 30 feet by 15, in clear height and width; and, as he proposed that these tubes, though resting on a central pier of masonry, were to pass entirely across the straits from one side to the other, observing the conditions prescribed by the admiralty, it is evident that they could not be much less, than 1000 feet in length when finished.

On the 5th of April, and afterwards on the 6th of May, 1845, Mr. R. Stephenson admitted, in examination before the select committee of the House of Commons, that the above was the only possible mode of throwing a bridge of such large openings over the Menai Straits, but he had so much confidence in the strength and rigidity of his proposed tubes, that, after they should be placed, he thought the suspension apparatus might be removed with safety. When I was examined by the same committee, on the last named day, I gave my opinion that the tubular bridge proposed by him would be strong and safe; and that, when properly fixed, it would not be injured by gales of wind, though I was not convinced that such tubes would be better than vertical trusses; but I differed entirely from the suggestion Mr. R. Stephenson had thrown out, as to the expediency of removing the suspension apparatus—a measure which I thought would not only be unnecessary,

but that it might endanger the security of the bridge.

From this, his second project, Mr. Stevenson has since departed, having been induced to give up illiptical and adopt rectangular tubes, in consequence of experiments tried at his request in 1846, by Mr. W. Fairbairn & Mr. E. Hodgkinson, both very experienced and skilful in the uses of iron, as applied to practical architecture and engineering, and the latter having investigated the subject mathematically, and laid down rules which have been published, and are deservedly held in high estimation; this, however, may be considered rather a modification than a change. Not so the decision afterwards adopted by Mr Stephenson, of abandoning the suspension principle altogether; instead of which he how proposes, as I have been informed by Capt. Moorsom, R.N., chairman of the Chester and Holyhead railway company, to put together in succession each of his tubes, which, according to this new arrangement, will be four in number, on a bridge of boats which will first be formed parallel to the shore, and will then be swung into the proper transverse position by the quarter circle movement, common in the practice of military bridges, after which the tube is to be suspended by chains; and though either of the sides will expose to the wind a surface of at least 1400 square feet, considerably exceeding the area of all the sails of a 28 gun ship, and will weigh, as I am told, about 1200 tons, each of these unwieldy masses, is to be raised up nearly 100 feet, by hydrostatic pressure and thus deposited and fixed on the lofty pier and abutment of masonry. If the proposed modes of passing the Chester and Holyhead railway over the Menai Straits had not been twice referred officially to me, as before stated, I should not have made any comments upon Mr. Stephenson's proceedings—but, under the circumstances above stated, I feel it my duty to express my entire dissent from this rash, if not impracticable, plan of operation, which cannot even be attempted without the risk of some very serious disaster, except at the high water slack of a deep tide, and in a perfect calm.

He has now, to my knowledge, proposed three projects, which have just been described all widely differing from each other, for passing the Chester and Holyhead railway over the Menai Straits; and I think that his second plan, the only one which I apppoved, would have been sufficiently arduous in itself, without adding to the difficulty, and diminishing the safety, of the attempt by the abandonment of the suspension principle; if he persists in this, his third plan of operation the chances are, that the first tube which he attempts to raise will find its way to the bottom of the straits.

Notwithstanding the objections publicly made by Mr. Locke, at Chester, to the interference of government departments with railway bridges, every disinterested person will admit that the lords of the admiralty only did their duty in putting a salutary veto upon Mr. R. Stevenson's first project, which, if it could have been carried into effect, of which I entertain great doubts, would have seriously injured the navigation of the Menai Staits, by rendering them impassable for many of the coasting vessels now employed there.

Railways and their Early Opponents.

The following paragraph, which we find in the London Mining Journal, of August 7th, is so truthlike, that we give it a place—with the simple observation, that the same remarks are equally applicable at the present day.

When Jacquard, the inventor of the wonderful loom that bears his name, was arrested and carried to Paris, with his machine, Carnot, in the presence of Napoleon, roughly said to him, "Are you the man that pretends to do that impossibility—to tie a knot in a stretched string?" His compatriots of Lyons, the impossibility being surmounted, broke his machines in 1806, and raised a statue to his memory in 1840. All those who are in advance of public opinion must bear ridicule or persecution. In 1825, the Quarterly Review thus ridiculed the notion of certain engineers—Telford among the rest—that a railway engine could go 18 or 20 miles an hour: "The gross exaggerations of the powers of the locomotive steam engine, or, to speak English, the steam carriage, may delude for a time, but must end in the mortification of those concerned. * * We should as soon expect the people of Woolwich to suffer themselves to be fired off upon one of Congreve's ricochet rockets, as trust themselves to the mercy of such a machine, going at such a rate." In that year, the common belief was, that railways were altogether delusions and impositions. The Liverpool and Manchester railway was opposed in Parliament with every form of invective. One member, in 1825, declared his opinion, "that a railway could not enter into successful competition with a canal. Even with the best locomotive engine, the average rate would be but 3½ miles per hour, which was slower than the canal conveyance." (Hansard, 2d series, vol. iv. p. 853.) Another assertion, which Mr. Huskisson was obliged to meet doubtfully and apologetically, was, "that there were two or three canals which were sufficient for every purpose of commerce in the districts through which the railway was to pass."—Let us be just to what we have been accustomed to decry as the dark ages. Let us be tolerant to those who imprisoned Galilio, and rewarded Columbus with chains. If there be a reality in any discovery—a true thing, and not a sham—if there be strength, or utility, or beauty in any work of mind—it will live and fructify, whatever critics, or orators, or inquisitors, or even kings, may do to crush it. And so it is with railways. On the 15th September, 1830, the first passenger line—the Liverpool and Manchester railway—was opened. The conveyance of passengers appears originally to have been an inferior consideration to the conveyance of goods; and the directors modesly anticipated that one-half of the passengers travelling by coaches between the two towns, might venture on the railway. In the first year after the opening, there were conveyed 445,000 passengers; in the year ending 1st July, 1845, the passengers so conveyed amounted to 807,000. On the 24th April, 1847, there has been a total expended on the railways of the United Kingdom, of £78,000,000 sterling; and in the last week the aggregate receipts upon these railways was £160,000, being a total exceeding £8,000,000 per annum, for the conveyance of passengers and goods.

Pennsylvania the Pioneer in Internal Improvements.

The Coal and Iron Trade of Pennsylvania in 1847.

We continue in this number our extracts from Mr. Child's pamphlet. He says:

Now, by way of contrast, let us take the total amount of capital invested in all the manufacturing establishments at Lowell, and see how it compares with the above expenditures. During a visit to that remarkable city, last summer, we obtained a copy of the "Statistics of Lowell Manufactures for 1846." From it we learn the following particulars. The amount of capital invested in all the factories, including buildings, machinery, houses, for the operatives, etc., is as follows:

Merrimack	Manuf.	Co.,	capital,	$2,000,000
Hamilton	"	"	"	1,200,000
Appleton	"	"	"	600,000
Lowell	"	"	"	600,000
Middlesex	"	"	"	750,000
Suffolk	"	"	"	600,000
Lawrence	"	"	"	1,500,000
Tremont Mills,			"	600,000
Boott cotton mills,			"	1,200,000
Massachusetts cotton mills,			"	1,200,000
Lowell machine shop,			"	300,000
Total capital,				$10,550,000

Thus it will be seen, that the whole amount invested in all the manufactories at Lowell, is *less than one-third* of the sum actually expended in constructing avenues for bringing Pennsylvania coal to market.

The increase in the shipments of coal coastwise from the commencement of the trade, is instructive.

The annual shipments of coal coastwise, from this port have been as follows:

1822,	4	vessels	carrying	181 tons.
1823,	11	"	"	1,123 "
1824,	40	"	"	3,958 "
1825,	190	"	"	19,378 "
1826,	271	"	"	27,413 "
1827,	397	"	"	39,327 "
1828,	469	"	"	45,915 "
1829,	489	"	"	47,100 "
1830,	644	"	"	63,137 "
1831,	563	"	"	55,640 "
1832,	1,592	"	"	158,442 "
1833,	2,010	"	"	198,168 "
1834,	1,575	"	"	156,154 "
1835,	2,361	"	"	267,139 "
1836,	3,225	"	"	344,812 "

During the subsequent nine years, our returns are incomplete.

With great labor, and the aid of several kind friends, we have been enabled to ascertain with great accuracy, the total number of vessels, and their class, which cleared from this port in 1846, and the quantity of coal despatched. This statement will serve to illustrate the great value of this branch of our business in a commercial point of view.

During the year 1846, there were cleared from Richmond, the depot of the Reading railroad company,

Ships,	1
Barks,	23
Brigs,	341
Schooners,	4,092
Sloops,	935
Steamboats,	14
Barges,	928
Boats,	1,150
Total,	7,485

The quantity of coal (Schuylkill) shipped in the above vessels amounted to 883,489 tons.

During the same period, there cleared from this city and at Bristol, laden with Lehigh coal, fourteen hundred and sixty-eight vessels exclusive of boats, carrying 181,792 tons.—As far as ascertained, these vessels comprised

Barks,	2
Brigs,	135
Schooners,	682
Sloops,	178
Barges,	186
Steamboats,	3
Class unknown,	282
Total,	1468

Total number of clearances from the port of Philadelphia in 1846, eight thousand nine hundred and fifty-three vessels, carrying one million sixty-five thousand two hundred and twenty-eight tons of coal, in addition to the quantity shipped in boats from the Lehigh mines.

The quantity of coal which passed through the Delaware and Raritan canal, to New York has been as follows:

In 1842,	171,754 tons.
1843,	198,332 "
1844,	267,496 "
1845,	372,072 "
1846,	339,924 "

The total number of arrivals at New York from foreign ports in 1845, was 2,041, and in 1846, 2,289; consisting of 571 ships, 425 barks, 901 brigs, 582 schooners, 7 steamboats and 3 galliots. We have been kindly furnished by Gen. Bogardus, the collector of that port, with the exact tonnage of these vessels; in 1845, the total tonnage from foreign ports was 577,386 tons, and in 1846, 627,579 tons, including 4 steamboats. Now let us compare this statement with the amount of coal shipped from Philadelphia in the same period, 1,065,228 tons, or 437,648 tons more than the whole tonnage arriving at New York. As many vessels will carry more than their registered tonnage, we will add 25 per cent. to the above amount, which would increase the tonnage to 784,474 tons—being nearly 300,000 tons less than the quantity of coal shipped from Philadelphia.

Does not this fact speak volumes in favor of our coal trade?

As a nursery for seamen, the Pennsylvania coal commerce, even in its infancy is entitled to consideration, in a national point of view. There is no department of our commerce, if we except the whale fisheries, which gives employment to so many vessels, or to so great an aggregate tonnage, or which calls into service so many seamen. In any emergency which might arise in the defence of our extended and dangerous sea coast, here would be found a body of hardy, bold and active men, trained for dangerous service, and equal in the most important qualifications, to the best seamen in our national vessels. Gt. Britain has for many years fostered her coal trade, with a view to the rearing up of seamen, to man her "wooden walls." Admiral Collingwood, and many other of her naval heroes, were trained on board British colliers.

It is not saying too much to assert, that the coal of Great Britain has been one of the chief sources of her prosperity—a prosperity which mines like those of Peru and Mexico would perhaps never have secured. That shrewd and sagacious writer, McCulloch, observes, in his Commercial Dictionary, "It is the possession of her coal mines, which has rendered Britain, in relation to the whole word, what a city is to the rural district which surrounds it—the producer and dispenser of the rich products of art and industry." If this remark be just, how clear is it that Pennsylvania must hold such a relation to the United States, if not to our whole continent. The more our position is contemplated, in the light either of history, or of sound judgment in regard to the elements of prosperity, the more clearly must it be seen, that the coal and iron of our mountains have an importance to our nation, not easily exaggerated.

On what grounds can our government reasonably hesitate to put forth her best energies for the sustaining of the great coal and iron interest of Pennsylvania—a Pennsylvania interest indeed, geographically, but a national interest in all its great ultimate bearings, if such a thing as a national interest, can be known or conceived of.

We feel that such statements as those which we present to our readers must powerfully arrest the attention of thinking men. In thus exhibiting, in an accurate statistical manner, the resources of Pennsylvania, we cannot be exposed to the imputation of a vain glorious spirit, and the information communicated must be new in a great measure, to most of our readers, and impressive to all.

In continuing our remarks on the Pennsylvania coal trade, we cannot forbear to quote the language of some eminent British writers in reference to the connection between the possession of coal mines and the prosperity of a nation.

The president of the British Statistical Society, Mr. Porter, speaks of the coal mines of England as "the source of greater riches than ever issued from the mines of Peru." He adds—"But for our command of fuel, the inventions of Watt and Arkwright would have been of small account; our iron mines must have long since ceased to be worked, and nearly every important branch of manufactures which we now possess, must have been rendered impracticable, or at least have been conducted upon a comparatively insignificant scale."

The well known Professor Buckland says—"The amount of work done by steam in England, has been supposed to be equivalent to that of three or four hundred millions of men, by direct labor; and we are almost astonished at the influence of coal and iron and steam, upon the fate and fortunes of the human race. It is 1800 feet below the earth's surface. It rows, it pumps, it excavates, it carries, it draws, it lifts, it hammers, it spins, it weaves, it prints. We need no further evidence to show that the presence of coal is, in an especial degree, the foundation of increasing population, riches and power, and of improvement in almost every art which administers to the necessities and comforts of mankind."

A writer in a well known English periodical, pronounces coal "the chief source of the national wealth and power, and the foundation of our manufacturing industry. Without such a supply of fuel, our iron, lead, tin and copper ores must have remained in their beds."

Of coal, and its proximity to iron ore, Professor Bakewell remarks, "The frequent occurrence of these minerals together, both destined in future to give to man an extensive empire over the elements, and to contribute largely to his means of civilization and comfort, cannot fail to impress the reflecting mind with evidence of prospective designing intelligence."

In a parliamentary document, Mr. Buddle the eminent engineer, states, in a striking manner, his view of this subject: "Should our coal mines ever be exhausted, the manufacturing interest would melt away at once. We should lose many of the advantages of our high civilization, and much of our cultivated ground must be shaded with forests, to afford fuel for the remnant of our present population."

Mr. McCulloch, author of the Commercial Dictionary, says—"Our coal mines are the principal sources and foundation of our manufacturing and commercial prosperity.—Since the invention of the steam engine, coal has become of the highest importance as a moving power; an no nation, however favorably situated in other respects, not plentifully supplied with this material, need hope to rival those that are, in most branches of manufacturing industry. The citizens of Glasgow, Manchester, etc., are able, at a small expense comparatively, to put the most powerful and complicated machinery in motion, and to produce results quite beyond the reach of those who have not the same command over coal or (as it has been happily defined) hoarded wealth. Our coal mines have been sometimes called the Black Indies; and it is certain they have conferred a thousand times more real advantage on us, than we have derived from the conquest of the Mogul Empire—or than we should have reaped from the dominion of Mexico or Peru.

When we remember that Pennsylvania is the only State which possesses anthracite coal (in any amount worthy of mention,) and when

we notice the remarkable *fact* that she is the only State which has direct access by water at once to the ocean, the lakes and the Mississippi, we perceive that her position, as well as her internal resources, is such as to justify very high expectations in reference to her future wealth and influence. Estimates based on the United States census of 1840, and other statistical returns, place the total value of real estate in Pennsylvania at $1,400,000,000 at the value of personal property at $700,000,000, making an aggregate capital of $2,100,000,000—more than three times that of New York! This result, striking as it is, becomes less astonishing, the more we contemplate the peculiar endowments of Pennsylvainia.

The three anthracite coal fields of Pennsylvania, are each about 65 miles in length, and 5 miles in width; embracing an area of 325 square miles, or 280,000 acres each.—The aggregate is 975 square miles or 624,000 acres.

We estimate the supply of anthracite coal for 1847, at 2,800,000 tons. The value of this quantity at $4 per ton, which may be taken as the average price at tide water, is $11,200,000. The importance of this trade to the city of Philadelphia, while it is great in other respects, is shown strongly in the fact that a large portion of the coal lands are owned here, and the revenue therefore reverts to our citizens. The constantly increasing use of this fuel in other parts of the country, tends to keep the balance of trade with other cities continually in our favor; and this tendency must increase with the increasing demand for our coal. The coal trade of Great Britain has made the port of Newcastle, which would otherwise be an unimportant place, second only to London in the amount of its shipping. A similar effect must our coal trade have upon the port of Philadelphia making it the great shipping port of the Union.

It is interesting and amusing to look back to the first attempts made to use the anthracite coal, and to bring it to market. Our venerable friend, Hon. Charles Miner, of Wilkesbarre, in his published account of his first efforts, in connection with Mr. Cist, and other associates, relates some pleasant anecdotes.

A hunter had first discovered the black earth which covers the coal at Mauch Chunk, and reported the discovery to Jacob Weiss, Esq, of Lehighton, who caused an examination to be made, and found anthracite coal within ten feet of the surface. The land, which had not been appropriated, was immediately taken out of the land office, and a company was formed, which partially opened the mine, and brought some small parcels of coal to Philadelphia. The difficulty of kindling the coal, prevented its introduction into use, and the project slept for twenty years.—During the war with Great Britain, bituminous coal rose to high prices. Judge Jesse Fell had shown that anthracite coal could be burned in grates, and it had been for several years used in Wilkesbarre and the neighboring towns, The demand for fuel in Philadelphia now led Mr. Miner and Mr. Cist to contrive a plan for mining and transporting the Mauch Chunk coal. On the 9th of August, 1814, they started off their first ark from Mauch Chunk. "In less than eighty rods from the place of starting, the ark struck on a ledge, and broke a hole in her bow.—The lads stripped themselves nearly naked, to stop the rush of water with their clothes." In six days, however, the ark reached Philadelphia, with its 24 tons of coal, which had by this time cost fourteen dollars a ton. But, says Mr. Miner, "we had the greater difficulty to overcome of inducing the public to use our coal, when brought to their doors. We published handbills, in English and German, stating the mode of burning the coal, either in grates, in smith's fires, or in stoves. Together we went to several houses in the city, and prevailed on the masters to allow us to kindle fires of anthracite in their grates, erected to burn Liverpool coal. We attended at blacksmith's shops, and persuaded some to alter the Too-iron, so that they might burn the Lehigh coal; and we were sometimes obliged to bribe the journeymen to try the experiment fairly, so averse were they to learning the use of a new sort of fuel."

How like a fable all this seems at the present day! As we sit before our coal fires, and think of no other, how little do we realize that thirty years ago Mr. Miner and Mr. Cist were trying the experiment of an anthracite fire at Wilkesbarre, and wondering whether they could not float an ark load of the coal to Philadelphia! Now we are reckoning the coal trade in millions of tons!

In the *Schuylkill* region the effort was made a little earlier. In 1812, Col. George Shoemaker loaded nine wagons with coal at the place now known as the Centreville mines, and proceeded to Philadelphia.—"Much time was spent by him in endeavoring to introduce it to notice, but all his efforts proved unavailing. Those who deigned to try it, declared Col. Shoemaker to be an imposter for attempting to impose stone on them for coal, and were clamorous against him. Not discouraged by the sneers cast upon him, he persisted in the undertaking, and at last succeeded in disposing of two loads, for the cost of transportation, and the remaining seven he gave to persons who promised to try to use it, and lost all the coal and charges."

These early persevering efforts cannot but be regarded now with grateful interest. To the enterprize of those men we are indebted for the knowledge of the great resources which now baffle computation. Let any one look around at our coal wharves and coal yards, and then look back a little more than thirty years, and in imagination see Mr. Shoemaker and Mr. Miner going about our city to find some one who would consent to try the despised stone coal in his shop or his fire place, and denounced as enthusiasts, or even imposters!

The consideration of the coal of Pennsylvania leads us naturally to speak of her beds of iron ore, and of the manufacture and uses of this metal. Before proceeding to this subject, it is proper to remark that in exhibiting the present state of the coal trade, we might have taken into view the fact that the *Schuylkill Navigation*, which has been undergoing enlragement, has necessarily been out of use for the past year, and that its capacity for transportation is now greatly increased.

NOTE.—Perhaps we should have before stated that all the companies in the Lehigh region own their own mines; but the value of them has in no case been included in our statement of the cost of the different railroads and canals. The Lehigh Coal and Navigation company, for instance, own 15,928 acres of land, upwards of 6,000 acres of which contain coal; out of 30 acres of land, 1,100,000 tons have already been mined and sent to market. The Little Schuylkill company's lands and improvements cost upwards of six hundred thousand dollars, in addition to the cost of their road. The aggregate value of the lands and improvements is of course very large. In the Schuylkill region a single company has expended $50,000 for steam engines and other fixtures.

To be continued.

TO CONTRACTORS.—KENNEBEC AND PORTLAND RAILROAD. Proposals will be received at this office, and at the office of the Resident Engineer, in Gardiner, until the 21st of August, for the Grading and Masonry of 21 miles of this road, extending from Bowdoinham to Augusta.

The line of road and the plans and profiles will be ready for examination on the 12th of August, after which time any information in relation to the work can be had at the engineer's office in Brunswick and Gardiner, or of the resident engineer on the line of the road.

Persons unknown to the officers of the company, must accompany their bids with satisfactory evidence of their ability to complete the work.

The remainder of the line from North Yarmouth to the depot of the Portland, Saco and Portsmouth Railroad in Portland, 15 miles, will be ready for contract on the 18th of September, of which due notice will be given. GEORGE S. GREENE,
Engineer K. & P. R. R.

ENGINEER'S OFFICE, K. & P. R. R.
Brunswick, July, 12, 1847. 2t33

NOTICE TO CONTRACTORS.—GREAT WESTERN RAILWAY, CANADA WEST. Sealed proposals will be received until the 1st day of next October, at the Office of the Great Western Railway Company, for the Grading and Masonry of the Western Division, extending from London to Windsor, a distance of one hundred and ten miles; also for the branch to Port Sarnia, forty-five miles in length.

Plans and Specifications of the work can be examined at the Engineers' Office, in Hamilton and London, on and after the 15th of September.
C. B. STUART, Engineer.
Hamilton, July 30, 1847. 2m32

LOCOMOTIVE AND CAR AXLES. The Subscribers are now prepared to receive orders for the well known and approved *Reading Locomotive and Car Axles*—drawn to any required pattern from *Bloom Iron only.* Address
SAM'L KIMBER & CO.,
Willow Street Wharf,
4tf Philadelphia, Pa.

THE SUBSCRIBER IS PREPARED TO execute at the Trenton Iron Works, orders for Railroad Iron of any required pattern, and warranted equal in every respect in point of quality to the best American or imported Rails. Also on hand and made to order, Bar Iron, Braziers' and Wire Rods, etc., etc.
PETER COOPER 17 Burling Slip,
1y10 New York.

BACK VOLUMES OF THE RAILROAD JOURNAL for sale at the office, No. 105 Chestnut street.

DAY, CROSKY & ROSS,
COMMISSION MERCHANTS,
57 THREADNEEDLE STREET, LONDON.
13 ORCHARD PLACE, SOUTHAMPTON.
SHIPPING & COMMISSION AGENTS
FOR
PASSENGERS, SPECIE, GOODS, PARCELS, etc.

☞ To all parts of the United States, North and South America, West Indies, India, [overland or otherwise,] Constantinople, Egypt, the Mediterranean, the Peninsula, and all parts of France—via Havre.

Agents at Cowes for the Ocean Steam Navigation of New York.

☞ Persons wishing to transact business with Messrs. D. C. & R., will please apply to the subscriber, who will make cash advances on consignments to their address.

July 31—3m ROBERT GRACIE.

TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.

PASCAL IRON WORKS.

WELDED WROUGHT IRON TUBES

From 4 inches to ¼ in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T's, L's, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER FLUES.

Manufactured and for sale by
MORRIS, TASKER & MORRIS.
Warehouse S. E. Corner of Third & Walnut Streets,
PHILADELPHIA.

LAP-WELDED WROUGHT IRON TUBES for Tubular Boilers, from 1¼ to 15 inches diameter, and any length not exceeding 17 feet—manufactured by the Caledonian Tube Company, Glasgow, and for sale by

IRVING VAN WART,
12 Platt street, New York.
JOB CUTLER, Patentee.

These Tubes are extensively used by the British Government, and by the principal Engineers and Steam Marine and Railway Companies in the Kingdom. 28tf

SPRING STEEL FOR LOCOMOTIVES, Tenders and Cars. The Subscriber is engagep in manufacturing Spring Steel from 1¼ to 6 inches in width, and of any thickness required: large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, *Agent*,
1y Albany Iron and Nail Works,

A. & G. RALSTON & CO., NO. 4 South Front St., Philadelphia, Pa.

Have now on hand, for sale, Railroad Iron, viz:
180 tons 2½ x ½ inch Flat Punched Rails, 20 ft. long.
25 " 2½ x ½ " Flange Iron Rails.
75 " 1 x ½ " Flat Punched Bars for Drafts in Mines. A full assortment of Railroad Spikes, Boat and Ship Spikes. They are prepared to execute orders for every description of Railroad Iron and Fixtures. 1tf

THE SUBSCRIBERS ARE PREPARED TO execute orders at their Phœnix Works for Railroad Iron of any required pattern, equal in quality and finish to the best imported.

REEVES, BUCK & CO.,
Philadelphia.
ROBERT NICHOLS, Agent,
26tf No. 79 Water St., New York.

PATENT RAILROAD, SHIP AND BOAT Spikes. The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York will be punctually attended to.

HENRY BURDEN, *Agent.*

Spikes are kept for sale, at Factory Prices, by I. & J. Townsend, Albany, and the principal Iron merchants in Albany and Troy; J. I. Brower, 222 Water St., New York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

*** Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand. ja45

MANUFACTURE OF PATENT WIRE Rope and Cables for Inclined Planes, Standing Ship Rigging, Mines, Cranes, Tillers etc., by

JOHN A. ROEBLING, *Civil Engineer*,
Pittsburgh, Pa.

These Ropes are in successful operation on the planes of the Portage Railroad in Pennsylvania, on the Public Slips, on Ferries and in Mines. The first rope put upon Plane No. 3, Portage Railrord, has now run 4 seasons, and is still in good condition. 2v19 1y

PATENT HAMMERED RAILROAD, SHIP and Boat Spikes. The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. JOHN F. WINSLOW, *Agent.*

Albany Iron and Nail Works, Troy, N. Y.

The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Etting, Philadelphia; Wm. E. Coffin & Co. Boston. ja45

MACHINE WORKS OF ROGERS, Ketchum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed beinglarge, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery

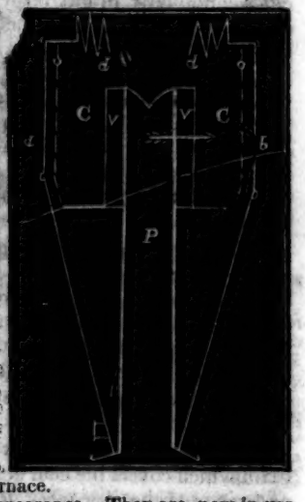
of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR,
a45 Paterson, N. J., or 60 Wall street, N. York.

FRENCH AND BAIRD'S PATENT SPARK ARRESTER.

TO THOSE INTERESTED IN Railroads, Railroad Directors and Managers are respectfully invited to examine an improved Spark Arrester recently patented by the undersigned.



Our improved Spark Arresters have been extensively used during the last year on both passenger & freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits:

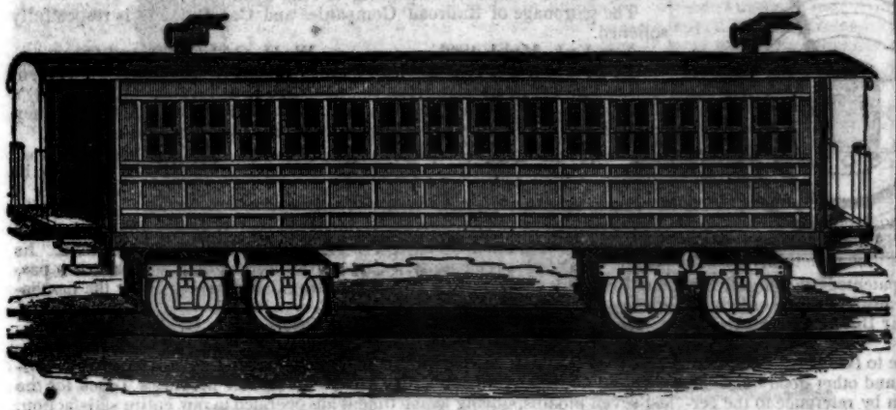
R. L. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendant Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendant Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburgh and Jackson Railroad, Vicksburgh, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. M'Kee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, care Messrs. Baldwin & Whitney, of this city or to Hinckly & Drury, Boston, will be promptly executed. FRENCH & BAIRD.

N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms. *Philadelphia, Pa., April 6, 1844.*

*** The letters in the figures refer to the article given in the *Journal* of June, 1844. ja45

DAVENPORT & BRIDGES'
CAR WORKS, CAMBRIDGEPORT, MASS.

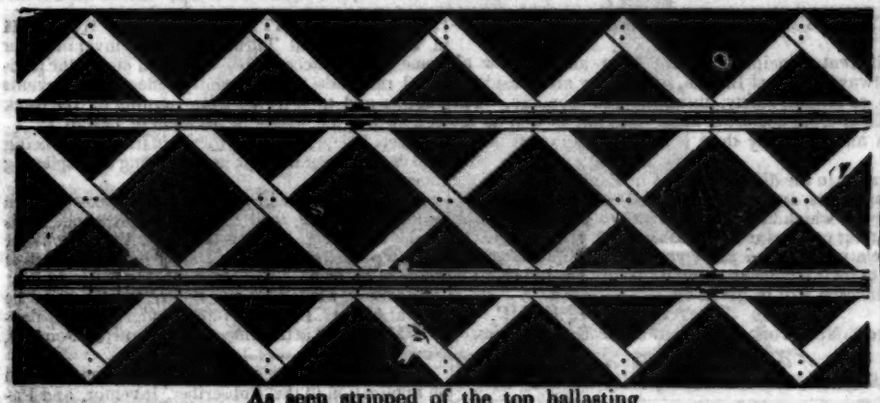


Manufacture to Order, Passenger and Freight Cars of every description, and of the most improved pattern; also furnish Snow Ploughs and Chilled Wheels of any pattern and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices.

All orders punctually executed and forwarded to any part of the country.

Our Works are within fifteen minutes ride from State street, Boston—Omnibuses pass every fifteen minutes. 10tf

THE HERRON RAILWAY TRACK,



As seen stripped of the top ballasting

A GOLD MEDAL AWARDED THE INVENTOR BY THE AMERICAN INSTITUTE.

THE UNDERSIGNED RESPECTFULLY invites the attention of Engineers, and Railroad Companies, to some highly important improvements he has recently made in the Herron system of Railway structure. These improvements enable him to effect a very large reduction in the quantity of Timber, and cost of construction, without impairing the strength of the Track, or its powers of resisting frost, while they secure additional features of excellence in the Drainage and facility of making Repairs.

The above cut represents the "Herron Track" as it is laid on the Philadelphia and Reading, and on the Baltimore and Susquehanna Railroads. The intersection of the sills of the trellis are 5 feet from centre to centre, while in the new construction they are only 2½ feet. This renders the string piece unnecessary, thus removing the only objectionable feature found in the Track.

The result of experience has proved that all Tracks constructed with longitudinal timbers, such as mud sills, and more especially, the continuous bearing string pieces retain the rain water that falls between the Rails, which, being thus confined, settles along those timbers, and accumulating in quantity flows rapidly along them on the descending grades, washing out the earth from under the timber, and frequently causing large breaches in the embankments of the road. Whereas all water intercepted by the oblique sills of the trellis, is discharged immediately into the side ditches.

In the 5 foot plan, the Track occupies a Road bed nearly 11 feet wide, while the new construction takes but 8 feet; the timber being more concentrated under the Rails. A block of hard wood, about 2 feet long and 15 inches wide, is introduced into a square of the trellis for the purpose of giving an additional, and effectual support to the joints of the Rails, which rest upon it. Should these joint blocks become chafed and worn by the working, and imbedding of the chairs, as is now the case on all Railroads, they can be readily replaced without any derangement of the timbers less liable to wear.

The following is a general estimate of its cost near the seaboard. In the interior it will be considerably less.

ESTIMATE OF THE PROBABLE COST OF ONE MILE.

4,224 Timbers, 11 ft. long, 3 x 6 inches = 68,696 ft. b.m., at $10 =	$686 96
587 Oak joint blocks 2 ft. x 3 x 15 in. = 4,403 ft. b.m., at $13 =	57 24
13,000 Spikes = 2,250 lbs. at 4½ cts	101 25
Workmanship free of patent charge	600 00
Cost of one mile including the laying of the Rail	$1,445 45

He has made other important improvements, which will be shown in properly proportioned models, that give a much better idea of the great strength of the Track than a drawing will do.

Sales of the Patent right to all the distant States will be made on liberal terms.

JAMES HERRON.
Civil Engineer and Patentee.
No. 277 South Tenth St., Philadelphia. 33tf

LAP—WELDED
WROUGHT IRON TUBES
FOR
TUBULAR BOILERS,
FROM 1 1-4 TO 6 INCHES DIAMETER,
and
ANY LENGTH, NOT EXCEEDING 17 FEET.

These Tubes are of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers.

THOMAS PROSSER,
Patentee.
1y25 28 Platt street, New York.

RAILROAD IRON.
MOUNT SAVAGE IRON WORKS

THIS Company are prepared to execute orders for RAILROAD IRON, of any pattern, and equal in point of quality to any other manufactured.

Address J. M. HOWE,
Pres't. Mt. Savage Iron Works,
Dec. 25, 1y* Maryland.

ENGINEERS' AND SURVEYERS'
INSTRUMENTS MADE BY
EDMUND DRAPER,
Surviving partner of
STANCLIFFE & DRAPER.

No 23 Pear street, below Walnut,
1y10 near Third, Philadelphia.

THE SUBSCRIBER has on hand a good assortment of his best Leveling and Surveying Instruments, among them his improved Compass for taking angles without the needle—also Bells, suitable for Churches, Railroad Depots, etc. ANDREW MENEELY.
West Troy, May 12, 1847. 1y*21

PIG AND BLOOM IRON.—THE SUBSCRIBERS are agents for the sale of numerous brands of Charcoal and Anthracite Pig Iron, suitable for Machinery, Railroad Wheels, Chains, Hollow ware, etc. Also several brands of the best Puddling Iron, Juniatta Blooms suitable for Wire, Boiler Plate, Axe Iron, Shovels, etc. The attention of those engaged in the manufacture of Iron is solicited by

A. WRIGHT & NEPHEW,
12tf Vine St. Wharf, Philadelphia.

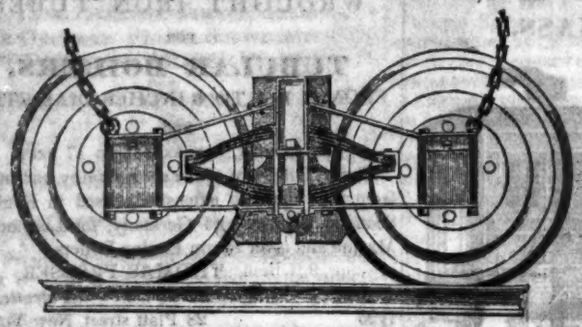
RAILROAD IRON.—THE "MONTOUR Iron Company," Danville, Pa., is prepared to execute orders for the heavy Rail Bars of any pattern now in use, in this country or in Europe, and equal in every respect in point of quality. Apply to MURDOCK, LEAVITT & CO.,
Agents.
1y48 77 Pine St., New York.

LAWRENCE'S ROSENDALE HYDRAulic Cement. This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Flooms and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

For sale in lots to suit purchasers, in tight papered barrels, by JOHN W. LAWRENCE,
142 Front street, New York.

☞ Orders for the above will be received and promptly attended to at this office. 32 1y

RAY'S EQUALIZING RAILWAY TRUCK.—THE SUBSCRIBER having recently formed a business connection in the City of New



York, expressly for the manufacture of the newly patented and highly approved Railroad Truck of Mr. Fowler M. Ray, is ready to receive orders for building the same, from Railroad Companies and Car Builders in the United States, and elsewhere.

The above Truck has now been in use from one to two years on several roads a sufficient length of time to test its durability, and other good qualities, and to satisfy those who have used it, as may be seen by reference to the certificates which follow this notice.

There have been several improvements lately introduced upon the Truck, such as additional springs in the bolster of passenger cars, making them delightful riding cars—adapting it to tenders, trucks forward of the locomotive, and freight cars, which, with its original good qualities, make it in all respects the most desirable truck now offered to the public.

Orders for the above, will, for the present, be executed at the New York Screw Mill, corner 33d street and 3d avenue, (late P. Cooper's rolling mills) and at the Steam Engine Shop of T. F. Secor & Co., foot of 9th street, East river, (of which firm the subscriber was late a partner) under the immediat supervision of Mr. Ray himself.

Several sets of trucks containing the latest improvements have recently been turned out for the New York and Erie railroad, and the New Jersey Transportation company, which may be seen upon said roads.

The patronage of Railroad Companies and Car Builders is respectfully solicited.

New York, May 4, 1846. W. H. CALKINS, and Others.

To all whom it may concern:—This is to certify that the New Haven, Hartford and Springfield railroad co., have had in use six sets of F. M. Ray's patent trucks for the last 20 months, during which time it appears to me, they have proved to be the bes and most economical truck now in use.

[Signed,] WILLIAM ROE, Sup't of Power.

I certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Philadelphia and Reading railroad for some time past, under a passenger car.

For simplicity of construction, economy in cost, lightness of material, and extreme ease of motion, I consider it the best truck we have ever used. Its peculiar make also renders it less liable to be thrown off the track, when passing over any obstruction. We intend using it extensively under the passenger and freight cars of the above road.

Reading, Pa., October 6, 1845. [Signed,] G. A. NICOLL, Sup,t Transportation, etc., Philadelphia and Reading Railroad.

To all whom it may concern:—This is to certify that the N. Jersey Railroad and Transportation company have used Fowler M. Ray's Truck for the last seven months, during which time it has operated to our entire satisfaction. I have no hesitation in saying that it is the simplest and most economical truck now in use. [Signed,] T. L. SMITH,

Jersey City, November 4, 1845. N. Jersey Railroad and Transp. Co.

This is to certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Long Island railroad for the last year, under a freight car.

For simplicity of construction, economy in cost, lightness of material and ease of motion, I consider it equal to any truck we have in use.

Long Island Railroad Depot, Jamaica November 12, 1845. [Signed,] JOHN LEACH, Sup't Motive Power

1y19

ENGLISH PATENT WIRE ROPES—FOR THE USE OF MINES, RAILWAYS, ETC.—for sale or imported to order by the subscriber.

These Ropes are manufactured on an entirely different principle from any other, and are now almost exclusively used in the collieries and on the railways in Great Britain, where they are considered to be greatly superior to hempen ones, or iron chains, as regards safety, durability and economy. The plan upon which they are made effectually secures them from corrosion in the interior, as well as the exterior of the rope, and gives a greater compactness and elasticity than is found in any other manufacture.

Many of these ropes have been in constant operation in the different mines in England, and on the Blackwall and other inclined planes, for three and four years, and are still in good condition.

They have been applied to almost every purpose for which hempen ropes have been used—mines, heavy cranes, standing rigging, window cords, lightning conductors, signal halyards, tiller ropes, etc. Reference is made to the annexed statement for the relative strength and size. Testimonials from the most eminent engineers in England can be shown as to their efficiency, and any additional information required respecting the different descriptions and application will be given by

ALFRED L. KEMP,
75 Broad street, New York, sole agent in the United States.

Statement of Trial made at the Woolwich Royal Dock Yard, of the Patent Wire Ropes, as compared with Hempen Ropes and Iron Chains of the same strength.—October, 1841.

WIRE ROPES.				HEMPEN ROPES.			CHAINS.		STRENGTH
Wire gauge number.	Circumference of rope.	Weight per fathom.		Circumference of rope.	Weight per fathom.		Weight per fathom.	Diameter of iron.	Tons.
	INCH.	LBS.	OZ.	INCH.	LBS.	OZ.	LBS.	INCH.	
11	4½	13	5	10	24	–	50	15-16	20
13	3½	8	3	8½	16	–	27	11-16	13¼
14	3¼	6	11	7½	12	8	17	9-16	10½
15	2¾	5	2	6½	9	4	13½	1-2	7½
16	2¼	4	3	6	8	8	10½	7-16	7

N.B. The working load, with a perpendicular lift, may be taken at 6 *cwt. for every lb. weight per fathom, so that a rope weighing* 5 *lbs. per fathom would safely lift* 3360 *lbs., and so on in proportion.* 1y24

RAILROAD SCALES.—THE ATTENTION of Railroad Companies is particularly requested to Ellicotts' Scales, made for weighing loaded cars in trains, or singly, they have been the inventors, and the first to make platform scales in the United States; supposing that an experience of **20** years has given a knowledge and superior advantage in the business.

The levers of our scales are made of wrought iron, all the bearers and fulcrums are made of the best cast steel, laid on blocks of granite, extending across the pit, the upper part of the scale only being made of wood. E. Ellicott has made the largest Railroad Scale in the world, its extreme length was one hundred and twenty feet, capable of weighing ten loaded cars at a single draft. It was put on the Mine Hill and Schuylkill Haven Railroad.

We are prepared to make scales of any size to weigh from five pounds to two hundred tons.

ELLICOTT & ABBOTT.
Factory, 9th street, near Coates, cor. Melon st.
Office, No. 3 North 5th street,
1y35 Philadelphia, Pa.

THE SUBSCRIBERS, AGENTS FOR the sale of Codorus, Glendon, Spring Mill and Valley, } Pig Iron.

Have now a supply, and respectfully solicit the patronage of persons engaged in the making of Machinery, for which purpose the above makes of Pig Iron are particularly adapted.

They are also sole Agents for Watson's celebrated Fire Bricks and prepared Kaolin or Fire Clay orders for which are promptly supplied.

SAM'L. KIMBER, & CO.,
59 North Wharves,
Jan. 14, 1846. [1y4] *Philadelphia, Pa.*

RAILWAY IRON.—THE BEST QUALITY of English Heavy H Rails—60 lbs. to the yard—now in store, landing from the vessel, and on ship board to arrive, for sale on most favorable terms by

DAVIS, BROOKS & CO.,
Jan. 2. [1tf] 68 Broad St., New York.

NICOLL'S PATENT SAFETY SWITCH for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee G. A. NICOLLS,
ja45 *Reading, Pa.*

TO RAILROAD COMPANIES AND MANufacturers of railroad Machinery. The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside. THOMAS & EDMUND GEORGE,
a45 N. E. cor. 12th and Market sts., Philad., Pa.

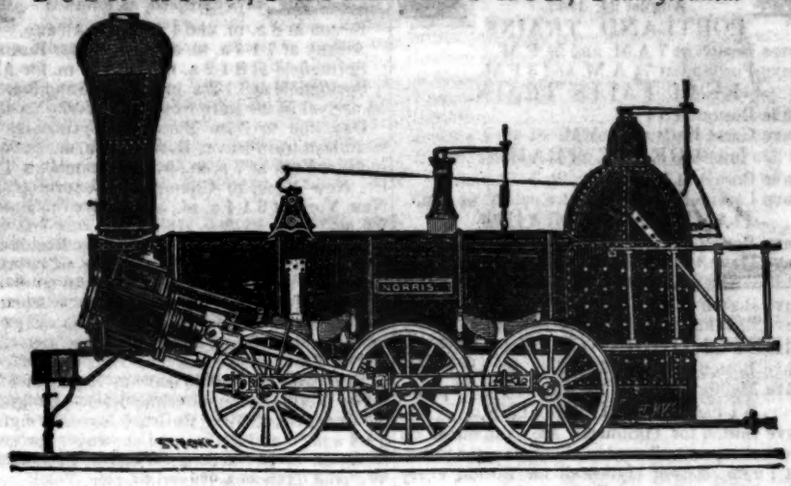
RAILROAD IRON.—THE NEW JERSEY Iron Company, Boonton, N. J., are now making Railroad Bars, and are prepared to execute orders for any required pattern. Apply to

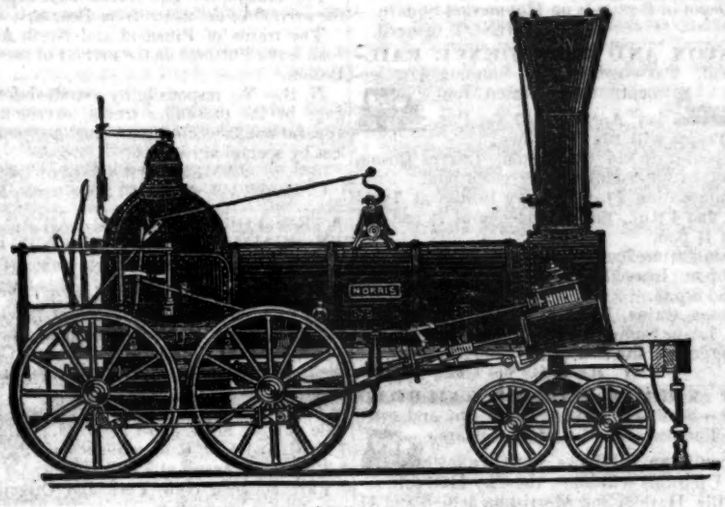
FULLER & BROWN, Agents,
No. 139 Greenwich, corner of Cedar street.
June 1, 1847. 10tf

RAILWAY IRON.—DAVIS, BROOKS & Co., No. 68 Broad Street, have now in port on Ship-board, 200 Tons of the best English heavy H Rails, 60 lbs. to the lineal yard, which they offer for sale on favorable terms, *also*, about 6 to 700 Tons now on the way, to arrive shortly, of the same description of Rail. 46tf

NORRIS' LOCOMOTIVE WORKS.

BUSH HILL, PHILADELPHIA, Pennsylvania.





MANUFACTURE their Patent 6Wheel Combined and 8 Wheel Locomotives of the following descriptions, viz:

Class	1,	15	inches	Diameter of	Cylinder,	× 20	inches	Stroke.
"	2,	14	"	"	"	× 24	"	"
"	3,	14½	"	"	"	× 20	"	"
"	4,	12½	"	"	"	× 20	"	"
"	5,	11½	"	"	"	× 20	"	"
"	6,	10½	"	"	"	× 18	"	"

With Wheels of any dimensions, with their Patent Arrangement for Variable Expansion.

Castings of all kinds made to order: and they call attention to their Chilled Wheels for the Trucks of Locomotives, Tenders and Cars.

NORRIS, BROTHERS.

KEARNEY FIRE BRICK. F. W. BRINLEY, Manufacturer, Perth Amboy, N. J. Guaranteed equal to any, either domestic or foreign. Any shape or size made to order. Terms, 4 mos. from delivery of brick on board. Refer to

James P. Allaire, Peter Cooper, Murdock, Leavirt & Co. } New York.
J. Triplett & Son, Richmond, Va.
J. R. Anderson, Tredegar Iron Works, Richmond, Va.
J. Patton, Jr. Colwell & Co. } Philadelphia, Pa.
J. M. L. & W. H. Scovill, Waterbury, Con.
N. E. Screw Co. Eagle Screw Co. } Provicence, R. I.
William Parker, Supt. Bost. and Worc. R. R.
New Jersey Malleable Iron Co., Newark N. J
Gardiner, Harrison & Co. Newark, N. J

25,000 to 30,000 made weekly. 35

THE NEWCASTLE MANUFACTURING Company continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gearing of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention. ANDREW C. GRAY,

a45 President of the Newcastle Manuf. Co.

RAILROAD IRON AND LOCOMOTIVE Tyres imported to order and constantly on hand by A. & G. RALSTON

Mar. 20tf 4 South Front St., Philadelphia.

VALUABLE PROPERTY ON THE MILL Dam For Sale. A lot of land on Gravelly Point, so called, on the Mill Dam, in Roxbury, fronting on and east of Parker street, containing 38,497 square feet, with the following buildings thereon standing.

Main brick building, 120 feet long, by 46 ft wide, two stories high. A machine shop, 47x43 feet, with large engine, face, screw, and other lathes, suitable to do any kind of work.

Pattern shop, 35x32 fe. with lathes, work benches,

Work shop, 86x35 feet, on the same floor with the pattern shop.

Forge shop, 118 feet long by 44 feet wide on the ground floor, with two large water wheels, each 16 feet long, 9 ft diameter, with all the gearing, shafts, drums, pulleys, &c., large and small trip hammers, furnaces, forges, rolling mill, with large balance wheel and a large blowing apparatus for the foundry.

Foundry, at end of main brick building, 60x45½ feet two stories high, with a shed part 45½x20 feet, containing a large air furnace, cupola, crane and corn oven.

Store house—a range of buildings for storage, etc., 200 feet long by 20 wide.

Locomotive shop, adjoining main building, fronting on Parker street, 54x25 feet.

Also—A lot of land on the canal, west side of Parker st., containing 6000 feet, with the following buildings thereon standing:

Boiler house 50 feet long by 30 feet wide, two stories.

Blacksmith shop, 49 feet long by 20 feet wide.

For terms, apply to HENRY ANDREWS, 48 State st., or to CURTIS, LEAVENS & CO., 106 State st., Boston, or to A. & G. RALSTON & Co., Philadelphia. ja45

TO LOCOMOTIVE AND MARINE ENgine Boiler Builders. Pascal Iron Works, Philadelphia. Welded Wrought Iron Flues, suitable for Locomotives, Marine and other Steam Engine Boilers, from 2 to 5 inches in diameter. Also, Pipes for Gas, Steam and other purposes; extra strong Tube for Hydraulic Presses; Hollow Pistons for Pumps of Steam Engines, etc. Manufactured and for sale by

MORRIS TASKER & MORRIS,

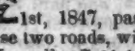
Warehouse S. E. corner 3d and Walnut Sts., Philadelphia 1tf

PATENT INDESTRUCTIBLE WATER Pipes. The subscribers continue to manufacture the above Pipes, of all the sizes and strength required for City or Country use, and would invite individuals or companies to examine its merits.—This pipe, unlike cast iron and lead, imparts neither color, oxide or taste, being formed of strongly riveted sheet iron, and evenly lined on the inside with hydraulic cement. While in the process of laying, it has a thick covering externally of the same—thus forming nature's own conduit of stone. The iron being thoroughly enclosed on both sides with cement, precludes the possibility of rust or decay, and renders the pipe truly *indestructible*. The prices are less than those of iron or lead. We also manufacture Basons and D. Traps, for Water Closets, on a new principle, which we wish the public to examine at 112 Fulton street, New York.

28tf J. BALL & CO,

CONNECTION BETWEEN THE BOSTON and Lowell and the Boston and Maine Railroads. On and after April

1st, 1847, passenger trains



between these two roads, will run as follows, viz:

Leaving Lowell at 7, 11 1-4 a.m., and 2 1-2, 4 1-2, and 6 1-2 p.m., to connect at the junction in Wilmington with the eastward trains—at 7 a.m. and 2 1-2 p.m. with those to Portland; at 4 1-2 p.m. to Great Falls only, with a detention of 45 minutes at the junction, and at 11 1-4 a.m. and 6 1-2 p.m. to Haverhill only. Leaving the junction in Wilmington, for Lowell, at about 7 1-4 a.m. on arrival of the morning train from Haverhill; at about 9 a.m., on arrival of the morning trains from Great Falls. At about 11 3-4 a.m., on arrival of the morning train from Portland. At about 5 p.m. on arrival of the afternoon trains from Haverhill. At about 7 1-4 p.m. on arrival of the afternoon train from Portland.

WALDO HIGGINSON, Agent.

CONCORD RAILROAD.—PASSENGER Trains in connection with the Lowell & Nashua Railroads, run daily between Concord and Boston, Sundays excepted, as follows, viz:

Leave Concord at 5 40 and 11 5 a.m. and 3 15 p.m.
Leave Boston at 7 and 11 a.m. and 5 p.m.

This road runs by Nashua and Manchester to Concord N. H., where it connects with the Northern railroad, extending from Concord to the mouth of White river in Vermont, 18 miles of which road, to Franklin, is now opened, and the remainder is rapidly completing.

It is the direct route to Central and northern New Hampshire, and to Montpelier, Burlington, and other towns in northern Vermont, and has a greater proportion of railroad conveyance in those directions than any other line.

It is also the British Steam Mail Line, and the nearest route from Boston to the Canadas. Numerous stages connect with all parts of the road.

For further information, apply at B. P. Cheney & Co.'s Express office, No. 8 Court St., and Averill & Dean, No. 15 Elm St.

All passengers' baggage should be properly marked, and when valued at more than $50, notice must be given, and extra charges paid, or no loss beyond such amount will be allowed.

26tf N. G. UPHAM, Supt.

NORWICH AND WORCESTER RAILRoad. Summer Arrangement. Change of Hours. Commencing on Wednesday, April 21, 1847.

Accommodation Trains, daily, (except Sunday.) Leave Norwich, at 6 a. m., and 4½ p. m. Leave Worcester, at 8½ a. m., and 4½ p. m.

☞ The morning Accommodation Trains from Norwich, and from Worcester, connect with the trains of the Boston, and Worcester and Western railroads each way.

The Evening Accommodation Train from Worcester connects with the 2½ p.m. train from Boston.

New York Train via Steamboat—Leave Norwich for Boston, every morning, except Monday, on the arrival of the stamboat from New York, stopping at Norwich and Danielsonville.

Leave Worcester for New York, upon the arrival of the train from Boston, at about 6½ p.m., daily, except Sunday, stopping at Danielsonville and Norwich.

Freight Trains daily each way, except Sunday.—Leave Norwich at 7, and Worcester at 6 30 a. m. Special contracts will be made for cargoes, or large quanties of freight, on application to the superintendent.

☞ *Fares are Less when paid for Tickets than when paid in the Cars.* ☜

3:1y J W. STOWELL, Sup't

LONG ISLAND RAILROAD COMPANY. Summer Arrangement. On and after Monday May 1st, trains will run as follows, except Sundays:

Leave—Brooklyn at 9 1-2 a.m. for Farmingdale, 1 1-2 p.m. for Greenport, at 4 p.m. for Farmingdale.

Leave Farmingdale at 7 a.m for Brooklyn, 12 m. do., at 3 1-4 do. do.

Leave Greenport at 8 1-2 a.m. for Brooklyn.

Leave Jamaica at 8 a.m. for Brooklyn, at 1 p.m. do., at 4½ p.m do.

On Saturdays, a train will leave Brooklyn for Yaphank, at 4 p.m. Leave Yaphank, on Mondays for Brooklyn at 5 1-2 a.m.

On and after May 15th, and until September 1st, 1847, a train will leave Jamaica at 7 a.m. for Brooklyn—leave Brooklyn at 6 p.m. for Jamaica, and will land and receive passengers at any place between Brooklyn and Jamaica.

On Sundays—leave Brooklyn at 8 1-2 a.m. for Farmingdale; leave Farmingdale at 4 p. m. for Brooklyn.

Freight Trains—leave Brooklyn at 10 a.m. for Greenport; leave Greenport at 12 m. for Brooklyn.

Baggage crates will be in readiness at the foot of Whitehall street, to receive baggage for the several trains, 30 minutes before the hour of starting from the Brooklyn side.

The steamer "Statesman," Captain Nash, leaves Greenport for Sag Harbor on the arrival of the Accommodation train from Brooklyn.

26tf DAVID S. IVES, Sup't.

BOSTON AND MAINE RAILROAD. Upper Route, to Portland and the East.

SUMMER ARRANGEMENT,

August 24, 1847.

PORTLAND TRAINS.

Leave Boston at 7 A.M. and 2½ P.M.
Leave Portland at 7½ A.M. and 3 P.M.

GREAT FALLS TRAIN.

Leave Boston at 5 P.M.
Leave Great Falls at 6½ A.M.

LAWRENCE TRAINS.

Leave Boston at 7, 11½ a.m., 2½, 5, 6½ p.m.
Leave Lawrence at 6½, 8½, 11 a.m., 4½, 6½ p.m.

HAVERHILL TRAINS.

Leave Boston at 11½ A.M. and 6 20 P.M.
Leave Haverhill at 6½ A.M. and 4½ P.M.

READING TRAINS.

Leave Boston at 8½ A.M. and 8½ P.M.
Leave Reading at 6 A.M. and 1½ P.M.

MEDFORD BRANCH TRAINS.

Leave Boston at 7½, 9 a.m., 12 m., 2½, 5½, 7 p.m.
Leave Medford at 6½, 8, 10½ a.m., 1½, 4½, 6 p.m.

STEAMBOAT TRAINS.

Leave Boston for Hallowell, Me., and towns on the Kennebec, every Tuesday, Thursday and Saturday at 7 a.m. Leave Hallowell for Boston, every Monday, Wednesday and Friday at 8½ a.m.

The Depot in Boston is on Haymarket Square.

1y31 CHAS. MINOT, *Sup't.*

BOSTON AND PROVIDENCE RAILroad. Passenger Notice. Summer Arrangement. On and after Monday, April 5, 1847, the Passenger Trains will run as follows:

Steamboat train via Stonington—Leaves Boston every day, except Sunday, at 5 o'clock p.m.

Accommodation Trains—leave Boston at 7 and 10½ a.m. and 4 p.m., and Providence at 7½ and 10½ a.m. and 4½ p.m.

Dedham trains, leave Boston at 8 a.m., 12½, 3½, 6½ and 9 p.m., Leave Dedham at 7 and 9½ a.m. and 2½, 5½ and 8 p.m.

Stoughton trains, leave Boston at 11½ a.m. and 5½ p.m. Leave Stoughton at 7 10 a.m. and 3½ p.m.

All baggage at the risk of the owners thereof.

25tf W. RAYMOND LEE, *Sup't.*

NEW YORK & HARLEM RAILROAD CO.—Summer Arrangement.—On and after Tuesday, June 1st, 1847, the cars will run as follows, until further notice. Up trains will leave the City Hall for—

Yorkville, Harlem and Morrisana at 6, 8 and 11 a.m., 2, 2 30, 5 and 7 p.m.

For Morrisiana, Fordham, Williams' Bridge, Tuckahoe, Hart's Corner and White Plains, 7 and 10 a.m., 4 and 5 30 p.m.

For White Plains, Pleasantville, Newcastle, Mechanicsville and Croton Falls, 7 a.m. and 4 p.m.—Freight train at 1 p.m.

Returning to New York, will leave—

Morrisiana and Harlem, 7, 8 20 and 9 a.m., 1, 3, 4 30, 6, 6 28 and 8 p.m.

Fordham, 8 08 and 9 15 a.m., 1 20 and 6 15 p.m.

Williams Bridge, 8 and 9 08 a.m., 1 10, 6 08 p.m.

Tuckahoe, 7 38 and 8 25 a.m., 12 55 and 5 52 p.m.

White Plains, 7 10 and 8 35 a.m., 12 50, 5 35 p.m.

Pleasantville, 8 15 a.m. and 5 15 p.m.

Newcastle, 8 a.m. and 5 p.m.

Mechanicsville, 7 48 a.m. and 4. 48 p.m.

Croton Falls, 7 30 a.m. and 4 30 p.m. Freight train at 10 a.m.

Freight train will leave 32d street for Croton Falls and intermediate places, 4 a.m and City Hall 1 p.m.

Returning, leave Croton Falls 10 a.m. and 9½ p.m.

ON SUNDAYS, the trains will run as follows:

Leave City Hall for Croton Falls, 7 a.m, 4 p.m.

Croton Falls for City Hall, 7 30 a.m., 4 30 p.m.

Leave City Hall for White Plains and intermediate places, 7 and 10 a.m. 4 and 5 30 p.m.

White Plains for City Hall, 7 10 and 8 35 a.m., 12 30 and 5 35 p.m.

Extra trains will be run to Harlem, Fordham and Williams Bridge on Sunday, when the weather is fine.

The trains to and from Croton Falls will not stop on N. York island, except at Broome st. and 32d st.

A car will preceed each train 10 minutes to take up passengers in the city.

WESTERN RAILROAD.—ON AND AFter Monday, April 5, 1847, the passenger trains will leave daily, Sundays excepted, as follows:

Boston at 8 a. m. and 4 p. m. for Albany.

Albany at 7 1-4 a. m. and 5 p. m. for Boston.

Springfield at 8 1-2 a. m. and 1 p. m. for Albany.

Springfield at 8 1-2 a. m. and 1 1-2 and 3 p. m. (or on arrival of the train from New York) for Boston.

Day line to New York, via Springfield.—The steamboat train leaves Boston at 6 a. m., and arrives in New York at 7 p. m., by the steamboats Traveller, New York, or Champion. Returning, leaves New York at 6 1-4 a. m., and arrives in Boston at 7 p. m.

Night line to New York.—Leaves Boston at 4 p. m., and arrives in New York at 5 a. m.

Albany and Troy.—Leave Boston at 8 a. m., Springfield at 1 p. m., and arrive in Albany at 6 p. m.; or, leave Boston at 4 p.m., Springfield next morning at 8 1-2, and arrive in Albany at 1 1-2 p.m.

The Troy trains connect at Greenbush.

The trains for Buffalo leave at 7½ a.m. and 7 p.m.

For Northampton, Greenfield, etc.—The trains of the Connecticut River Railroad leave Springfield at 8 1-4 a.m., 1 and 3 p.m., and passengers proceed directly on to Brattleboro', Windsor, Bellows Falls, Walpole, Hanover, Haverhill, etc.

For Hartford.—The trains leave Springfield on the arrival of the trains from Boston.

The trains of Pittsfield and North Adams Railroad leave Pittsfield on the arrival of the trains from Boston.

N. B.—No responsibility assumed for any baggage by the passenger trains, except for wearing apparel not exceeding the value of fifty dollars, unless by special agreement.

JAMES BARNES, Sup't and Eng'r.
C. A. SEAD, Agent, 27 State street, Boston.

NEW YORK AND ERIE RAILROAD LINE SUMMER ARRANGEMENT. For passengers, twice each way daily, (except Sunday,) leave New York from the foot of Duane St. at 7 o'clock, A. M. and at 4 o'clock, P. M. by steamboat, for Piermont, thence by cars to Ramapo, Monroe, Chester, Goshen, Middletown, Otisville, and the intermediate stations.

The return trains for New York will leave Otisville at 6 30, A. M. and 4 15, P. M.; Middletown at 7 A. M. and 4 40, P. M.; Goshen at 7 22, A. M. and 5 3, P. M.; Chester at 7 35, A. M. and 5 18, P. M.

Fare between New York and Otisville, $1 50; way-fare in proportion.

FOR MILK—Leave Otisville at 5½ o'clock, morning and evening.

FOR FREIGHT—The barges "Samuel Marsh and "Henry Suydam, Jr." will leave New York (from the foot of Duane St.) at 5 o'clock, P. M. daily (except Sundays.)

No freight will be received in New York after 5 o'clock, P. M.

Freight for New York will be taken by the trains leaving Otisville at 10½ o'clock, A. M.; Middletown at 11½, A. M.; Goshen at 12½, P. M.; Chester at 1 o'clock, P. M., etc., etc.

For farther particulars, apply to J. F. CLARKSON, Agent, corner of Duane and West Sts., New York, or to S. S. POST, Superintendent Transportation, Piermont.

24tf H. C. SEYMOUR, Sup't.

GREAT SOUTHERN MAIL LINE! VIA Washington city, Richmond, Petersburg, Weldon and Charleston, S. C., direct to New Orleans. The only Line which carries the Great Southern Mail, and Twenty-four Hours in advance of Bay Line, leaving Baltimore same day.

Passengers leaving New York at 4½ P.M., Philadelphia at 10 P.M., and Baltimore at 6½ A.M., proceed without delay at any point, by this line, reaching Richmond in *eleven*, Petersburg in *thirteen and a half hours*, and Charleston, S. C., in *two days* from Baltimore.

Fare from Baltimore to Charleston.....$21 00
" " " Richmond..... 6 60

For Tickets, or further information, apply at the *Southern Ticket Office*, adjoining the *Washington Railroad Office*, Pratt street, Baltimore, to

1y14 STOCTON & FALLS, Agents.

LITTLE MIAMI RAILROAD.—OPEN TO SPRINGFIELD—Distance 84 miles—connecting at Xinia and Springfield with Messrs. Neil, Moore, & Co's. daily daylight lines of stages going east and north, to Columbus, Zanesville, Wheeling, Cleveland, and Sandusky City. via Urbana, Bellefontaine, Kenton, and the Mad river and lake Erie railroad, or Columdus, Delaware, and the Mansfield and Sundusky City railroad—forming, by these connections, the cheapest and most expeditious route to Buffalo, Niagara Falls, Rochester, Albany, New York, and Boston.

On and after Thursday, August 13, 1846, until further notice, a Passenger train will run as fllows

Leave Cincinnati daily at 9 A. M., for Milford, Foster's Crossing, Deerfield, Morrow, Fort Ancient, Freeport, Waynesville, Spring Valley, Xenia, Old Town, Yellow Springs, and Springfield.

Returning, will leave Springfield at 4 hours 35 minutes A. M. A line of Hacks runs in connection with the Cars, between Deerfield and Lebanon.

FARE—From Cincinnati to Lebanon....$1 00
" " " Xenia..... 1 50
" " " Springfield.. 2 00
" " " Columbus... 4 00
" " " Sundusky city 8 00

The Passenger trains runs in connection with Strader & Gorman's line of Mail Packets to Louisville.

Tickets can be procured at the Broadway Hotel, Dennison House, or at the Depot of the Company on East Front street.

Further information and through tickets for the Stage lines, may be procured at P. Campbell, Agent on Front street, near Broadway.

The company will not be responsible for baggage beyond 50 dollars in value, unless the same is returned to the conductor or agent, and freight paid at of a passage for every $500 in value over that amount.

The 1¼ P. M. train from Cincinnati, and the 2 40 P. M. train from Xenia, will be discontinued on and after Monday, the 10th instant.

A freight train will run daily.

47tf W. H. CLEMENT, *Sup't.*

PATERSON RAILROAD

Summer Arrangement.

Commencing April 20th, 1847, the cars will leave

Paterson at	New York at
8 o'clock a.m.	9½ o'clock a.m.
11½ o'clock a.m	12 1-4 o'clock p.m.
4 o'clock p.m.	5½ o'clock p.m.
On Sunday.	
8 o'clock a.m.	9½ o'clock a.m.
4 o'clock p.m.	5½ o'clock p.m.

25tf Office 75 Courtlandt St.

BALTIMORE AND OHIO RAILROAD. MAIN STEM. The Train carrying the Great Western Mail leaves Baltimore every morning at 7½ and Cumberland at 8 o'clock, passing Ellicott's Mills, Frederick, Harpers Ferry, Martinsburgh and Hancock, connecting daily each way with—the Washington Trains at the Relay House seven miles from Baltimore, with the Winchester Trains at Harpers Ferry — with the various railroad and steamboat lines between Baltimore and Philadelphia and with the lines of Post Coaches between Cumberland and Wheeling and the fine Steamboats on the Monongahela Slack Water between Brownsville and Pittsburgh. Time of arrival at both Cumberland and Baltimore 5½ P. M. Fare between those points $7, and 4 cents per mile for less distances. Fare through to Wheeling $11 and time about 36 hours, to Pittsburgh $10, and time about 32 hours. Through tickets from Philadelphia to Wheeling $13, to Pittsburgh $12. Extra train daily except Sundays from Baltimore to Frederick at 4 P. M., and from Frederick to Baltimore at 8 A. M.

WASHINGTON BRANCH.

Daily trains at 9 A. M. and 5 P. M. and 12 at night from Baltimore and at 6 A. M. and 5½ P. M from Washington, connecting daily with the lines North, South and West, at Baltimore, Washington and the Relay house. Fare $1 60 through between Baltimore and Washington, in either direction, 4 cents per mile for intermediate distances. s13y1

BALTIMORE AND SUSQUEHANNA Railroad.—Reduction of Fare. Morning and Afternoon Trains between Baltimore and York.—The Passenger trains run daily, except Sunday, as follows:

Leaves Baltimore at.....9 a.m. and 3½ p.m.
Arrives at.....9 a.m. and 6½ p.m.
Leaves York at.....5 a.m. and 3 p.m.
Arrives at.....12½ p.m. and 8 p.m.
Leaves York for Columbia at..1½ p.m. and 8 a.m.
Leaves Columbia for York at..8 a.m. and 2 p.m.

FARE.

Fare to York.....$1 50
" Wrightsville..... 2 00
" Columbia..... 2 12½
Way points in proportion.

PITTSBURG, GETTYSBURG AND HARRISBURG.

Through tickets to Pittsburg via stage to Harrisburg.....$9
Or via Lancaster by railroad..... 10
Through tickets to Harrisburg or Gettysburg.. 3
In connection with the afternoon train at 3½ o'clock, a horse car is run to Green Spring and Owing's Mill, arriving at the Mills at.....5½ p.m.
Returning, leaves Owing's Mills at.....7 a.m.

D. C. H. BORDLEY, *Sup't.*
31 1y Ticket Office, 63 North st.

LEXINGTON AND OHIO RAILROAD. Trains leave Lexington for Frankfort daily, at 5 o'clock a.m., and 2 p.m. Trains leave Frankfort for Lexington daily, at 8 o'clock a.m. and 2 p.m. Distance, 28 miles. Fare $1·25.

On Sunday but one train, 5 o'clock a.m. from Lexington, and 2 o'clock p.m. from Frankfort.

The winter arrangement (after 15th September to 15th March) is 6 o'clock a.m. from Lexington, and ma. 9. from Frankfort, other hours as above. 35ly

CENTRAL AND MACON AND WESTern Railroads, Ga.—These Roads with the Western and Atlantic Railroad of the State of Georgia, form a continuous line from Savannah to Oothcaloga, Ga., of 371 miles, viz:

	Miles.
Savannah to Macon—Central Railroad	190
Macon to Atlanta—Macon and Western	101
Atlanta to Oothcaloga—Western and Atlaniic	80

Goods will be carried from Savannah to Atlanta and Oothcaloga, at the following rates, viz:

	To Atlanta.	To Oothcaloga.
On Weight Goods—Sugar, Coffee, Liquor, Bagging, Rope, Butter, Cheese, Tobacco, Leather, Hides, Cotton Yarns, Copper, Tin, Bar & Sheet Iron, Hollow Ware & Castings	$0 50	$0 75
Flour, Rice, Bacon in Casks or boxes, Pork, Beef, Fish, Lard, Tallow, Beeswax, Mill Gearing, Pig Iron and Grind Stones	0 50	0 62½
On Measurement Goods—Boxes of Hats, Bonnets and Furniture, per cubic foot	0 20	0 26
Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per cubic foot	0 20 pr. 100 lbs.	35
Crockery, per cubic foot	0 15 " "	35
Molasses and Oil, per hhd., (smaller casks in proportion).	9 00	12 50
Ploughs, (large,) Cultivators, Corn Shellers, and Straw Cutters, each	1 25	1 50
Ploughs, (small,) and Wheelbarrows	0 80	1 05
Salt, per Liverpool Sack	0 70	0 95

Passage—Savannah to Atlanta, $10; Children, under 12 years of age, half price,
Savannah to Macon, $7.

☞ Goods consigned to the subscriber will be forwarded free of Commissions.

☞ Freight may be paid at Savannah, Atlanta or Oothcaloga.

F. WINTER, *Forwarding Agent, C. R. R.*
Savannah, Aug. 15th, 1846. 1y34

CENTRAL RAILROAD—FROM SAVANnah to Macon. Distance 190 miles.

This Road is open for the transportation of Passengers and Freight. Rates of Passage, $8 00. Freight—

On weight goods generally... 50 cts. per hundred.
On measurement goods..... 13 cts. per cubic ft.
On brls. wet (except molasses and oil).....$1 50 per barrel.
On brls. dry (except lime)... 80 cts. per barrel.
On iron in pigs or bars, castings for mills, and unboxed machinery..... 40 cts. per hundred.
On hhds. and pipes of liquor, not over 120 gallons.....$5 00 per hhd.
On molasses and oil.....$6 00 per hhd.

Goods addressed to F. WINTER, Agent, forwarded free of commission. THOMAS PURSE,
y40 Gen'l. Sup't. Transportation.

SOUTH CAROLINA RAILROAD.—A Passenger Train runs daily from Charleston, on the arrival of the boats from Wilmington, N. C., in connection with trains on the Georgia, and Western and Atlantic Railroads—and by stage lines and steamers connects with the Montgomery and West Point, and the Tuscumbia Railroad in N. Alabama.

Fare through from Charleston to Montgomery daily.....$26 50
Fare through from Charleston to Huntsville, Decatur and Tuscumbia..... 22 00

The South Carolina Railroad Co. engage to receive merchandize consigned to their order, and to forward the same to any point on their road; and to the different stations on the Georgia and Western and Atlantic railroad; and to Montgomery, Ala., by the West Point and Montgomery Railroad.

f25 JOHN KING, Jr, *Agent.*

THE WESTERN AND ATLANTIC Railroad.—This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur and Tuscumbia, Alabama, and Memphis, Tennessee.

On the same days, the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT,
Chief Engineer.
Atlanta, Georgia, April 16th, 1846. 1y1

NEW YORK AND PHILADELPHIA RAILroad line—direct. Via Newark, New Brunswick, Princeton, Trenton, and Bristol. (Through in six hours.) Leaving New York daily from the foot of Liberty street.

Morning line.....9 o'clock a.m.
Mail pilot line.....4½ " p.m.

The lines proceed direct to Bristol without change of cars, and thence by the new steamer, "John Stevens," to Philadelphia.

FARE BETWEEN NEW YORK & PHILA.

First class cars.....$4 00
Second class cars..... 3 00

Passengers will procure their *Tickets* at the office foot of Liberty st., where a commodious steamboat will be in readiness with Baggage-crates on board.

Fifty pounds of baggage will be allowed to each passenger in this line, and passengers are expressly prohibited from taking anything as baggage but their wearing apparel, which will be at the risk of the owner.

Philadelphia Baggage-crates are conveyed from city to city, without being opened by the way. Each train is provided with a car, in which are apartments and dressing rooms expressly for ladies' use.

Returning, the lines leave Philadelphia from the foot of Walnut st. at 9 a.m, and 4 1-2 p.m.

The lines for Baltimore leave Philadelphia daily, except Sundays, at 8 a.m., 3½ and 10 p.m., and Sundays only at 10 p.m.—being a continuation of the line from New York. 25tf

PHILADELPHIA AND READING RAILROAD.—Passenger Train Arrangement for **1847.**

A Passenger Train will leave Philadelphia and Pottsville daily, except Sundays, at 9 o'clock A. M.

The Train from Philadelphia arrives at Reading at 12 18 M.

The Train from Pottsville arrives at Reading at 10 43 A. M.

Fares.	Miles.	No. 1.	No. 2.
Between Phila. and Pottsville,	92	$3·50 and	$3·00
" " Reading,	58	2·25 and	1·90
" Pottsville "	34	1·40 and	1·20

Five minutes allowed at Reading; and three at other way stations.

Passenger Depot in Philadelphia corner of Broad and Vine streets. 8tf

PHILADELPHIA, WILMINGTON & BALTIMORE RAILROAD.—1847.

Summer Arrangement.

Philadelphia for Baltimore...8 a.m. and 10 p.m.
Baltimore for Philadelphia...9 a.m. and 8 p.m.
Connecting with Mail Lines North, South & West.

On Sundays, only the 10 *P. M. Lines run.*

The Boat Lines, via Newcastle & Frenchtown R.R.
Leave Philadelphia at 3½ p.m. } No line on Sun-
Leave Baltimore at 3 p.m. } day.

Accommodation Trains between Philadelphia & Wilmington.—Philadelphia to Wilmington, 8 a.m., *mail*, 12½ p.m., 4 p.m., 7 p.m., 10 p.m. *mail*. Wilmington to Philadelphia, 7 a.m., 1 p.m., *mail*, 4½ p.m., 7 p.m., 12½ a.m., *night mail*.

J. R. TRIMBLE,
9tf *Engineer and General Superintendent.*

GEORGIA RAILROAD. FROM AUGUSTA to ATLANTA—171 MILES.
AND WESTERN AND ATLANTIC RAILROAD FROM ATLANTA TO DALTON, 100 MILES.

This Road in connection with the South Carolina Railroad and Western and Atlantic Railroad now forms a continuous line, 408 miles in length, from Charleston to Dalton (Cross Plains) in Murray county, Ga.—32 miles from Chattanooga, Tenn.

RATES OF FREIGHT.		Between Augusta and Dalton. 271 miles.	Between Charleston, and Dalton. 408 miles.
1st class.	Boxes of Hats, Bonnets, and Furnature, per cubic foot.....	$0 18	$0 28
2d class.	Boxes and Bales of Dry Goods, Sadlery, Glass, Paints, Drugs and Confectionary, per 100 lbs.	1 00	1 50
3d class.	Sugar, Coffee, Liquor, Bagging, Rope, Cotton Yarns, Tobacco, Leather, Hides, Copper, Tin, Feathers, Sheet Iron, Hollow Ware, Castings, Crockery, etc.	0 60	0 85
4th class.	Flour, Rice, Bacon, Pork, Beef, Fish, Lard, Tallow, Beeswax, Bar Iron, Ginseng, Mill Gearing, Pig Iron, and Grindstones, etc.....	0 40	0 65
	Cotton, per 100 lbs.....	0 45	0 7
	Molasses, per hogshead.	8 50	13 50
	" " barrel....	2 50	4 25
	Salt per bushel.....	0 18	
	Salt per Liverpool sack..	0 65	
	Ploughs, Corn Shellers, Cultivators, Straw Cutters, Wheelbarrows...	0 75	1 50

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight payable at Dalton.

F. C. ARMS,
Sup't. of Transportation.

Augusta, Ga., July 15, 1847. 44-1y

RATES OF FREIGHT

On CHANDLER'S Through Transportation Line, between Charleston, S. C., or Savannah, Ga., and Decatur, Ala., and Knoxville, Tenn., and all intermediate points on the Tennessee River, viz:

Between Macon	and Decatur and immediate points.	$0 22½	1 54	1 05	0 81	0 86
	and Knoxville & intermediate points	0 22½	1 54	1 10	0 76	0 81
	and Chattanooga.				0 61	0 65
Between Augusta	and Decatur and intermediate points.	$0 24	1 70	1 15	0 85	0 90
	and Knoxville & intermediate points.	$0 24	1 70	1 20	0 80	0 85
	and Chattanooga.				0 65	0 70
Between Charleston or Savannah	and Decatur and intermediate points.	$0 32	2 20	1 35	1 05	1 10
	and Knoxville & intermediate points.	$0 32	2 20	1 40	1 00	1 05
	and Chattanooga.				$0 85	

1st class.—Boxes of Hats, Bonnets and Furniture per foot.....
2d class.—Boxes and Bales of Dry Goods, Shoes, Saddlery, Glass, Paints, Oils, (in cans) Drugs, Confectionaries, Shovels, Spades, Scythes, Smiths' Bellows, Baskets, Tubs, Sifters, Brooms and other light articles, per 100 lbs..
3d class.—Molasses, Sugar, Coffee, Liquor, Bagging, Rope, Cheese, Tobacco, Leather, Feathers, Hides, Wool, Copper, Tin, Sheet-iron, Nails, Casks, or Crates of Crockery, Hardware, and other heavy articles not enumerated below.
4th class.—Flour, Bacon, (in casks or boxes) Pork, Beef, Lard, Tallow, Butter, Beeswax, Bales of Rags, Ginseng, Green and Dried Fruit, (in casks or sacks) Pig-iron and Linseed Oil, per 100 lbs.....
Cotton. Per 100 lbs.....

Merchandize shipped from any of the northern ports, must be consigned to R. R. AGENT, CHARLESTON, S. C., or R. R. AGENT, SAVANNAH, GA.: and every package must be marked, care of B. CHANDLER, Chattanooga.

Charges will accompany the goods, and be collected by the boats on the Tennessee river, when delivered to the owner or consignee

No preference in the way of despatch, will be given to any produce intended for their line, but each lot will be sent off as it is received.

The warehouse of the undersigned will be enlarged during the summer, and an apparatus attached for hoisting or lowering freight to the river, without soil or injury.

He will have a train of wagons under his entire control, sufficient to conduct the fall business with great despatch.

B. CHANDLER.
Chattanooga, Tenn., July 1, 1847.

REGULAR RATES BETWEEN ATLANTA AND CHARLESTON OR SAVANNAH.

First class, per foot.....	$0 20
Second class, per 100 lbs.....	1 20
Cotton, per 100 lbs.....	0 55
Third class, per 100 lbs.....	0 60
Fourth class, per 100 lbs.....	0 50

FRANKLIN HOUSE,

No. 105 Chestnut Street, Philadelphia.

The undersigned takes the liberty of calling the attention of the readers of the Journal to the fact that the *Office* is removed from New York to the FRANKLIN HOUSE, *Philadelphia*, where he will be always pleased to *meet* and *greet* them. They will not only find a pleasant *Reading Room*, with lots of *foreign* periodicals, treating of *Railroads* and *Machinery*, but they will always find *good-sized* and *airy* rooms—*clean beds*—and a *well supplied* table. If they would have further proof of this, they have only to call, and judge for themselves, and much oblige the proprietor, D. K. MINOR.

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This is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

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